the OIL AND GAS JOURNAL

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The Normandie — Pride of France — claims honors as the world's largest and fastest ship. Its overall length is 1,029 ft. with a gross register of 79,280 tons. Has capacity for approximately 2000 passengers and carries crew of 1300. Aerial Explorations' photo courtesy French Line.

PENNIES Made it Safe

Representing an investment of many millions of dollars, the safety of this super ocean liner, its passengers and crew, was assured not by the *volume* of *dollars* expended, but rather by the expenditure of *pennies*—comparatively, of course,—pennies representing the small additional cost of the best and most efficient materials and equipment that money could buy.

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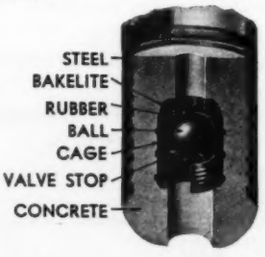
THESE FEATURES TELL THE STORY OF BAKER'S SAFETY and EFFICIENCY

Note in this cutaway of a Baker Cement Float Shoe how the plug and valve are firmly anchored in the seamless steel casing shoe — with Bakelite Valve Assembly set on end to present a minimum cross section to the drilling bit. The buoyant Bakelite Ball floats in cement slurry and double-seals at the slightest reversal of pressure against the rubber seat, backed by Bakelite. The non-metallic internal construction of Baker "floating" units permits ease in drilling up and drilling out—leaving no harmful fragments to interfere with further drilling or coring immediately below the SHOE.



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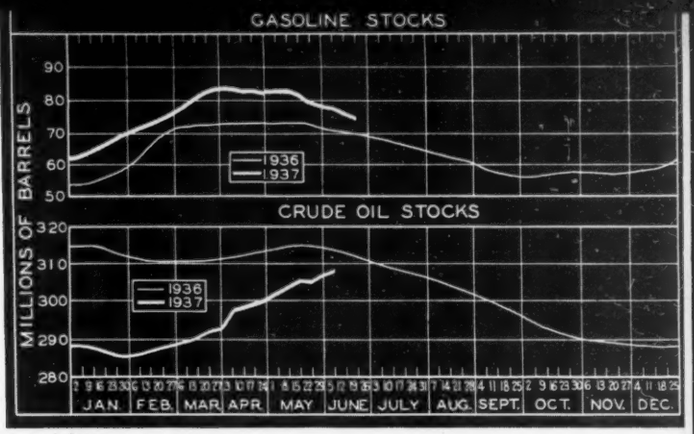


June Crude Output Is Excessive

THE continuance of crude production at practically the same levels established early in the month assures that the long sought balance in supply and demand will not be attained in June. While crude stock data have not been announced except for the first few days of the month, information from representative crude buyers shows they are continuing to send part of their pipe line runs to storage, with no indication that this situation will change over balance of month.

CRUDE PRODUCTION *3,519,558 barrels daily average—up 1,439 barrels.*

CRUDE STOCKS *307,223,000 barrels as of June 5—up 778,000 barrels.*

GASOLINE STOCKS *76,574,000 barrels as of June 19—down 422,000 barrels.*

REFINERY RUNS *3,320,000 barrels daily average past week—up 70,000 barrels.*

Production last week was 153,552 barrels daily in excess of estimated demand with 120,690 barrels or 76 per cent of the total excess accounted for by California and Texas. All of the principal oil states were producing in excess of estimated demands and state allowables except Louisiana.

The outlook for July in the light of what has happened in June does not appear particularly bright at this time. The Bureau of Mines estimates the July demand at 3,423,800 barrels daily, 57,800 barrels more than June and 453,000 barrels higher than the actual demand in July, 1936. From the demand side this estimate is bullish and all that could be expected. The trouble lies in the fact that state proration bodies do not appear able to keep current output within even these high demand figures, with present output considerably in excess of the July estimated requirements.

No special weakness in crude markets is reported. While some of the crude buyers who have been running oil to storage for several months have indicated they desire to stop the practice, they are not dropping well connections and the amount of spot crude available is relatively small. Despite the heavy Louisiana and Texas production, both crude and refinery markets are tight in the coastal area owing to the heavy commitments for export and coastwise delivery over the next 60 days.

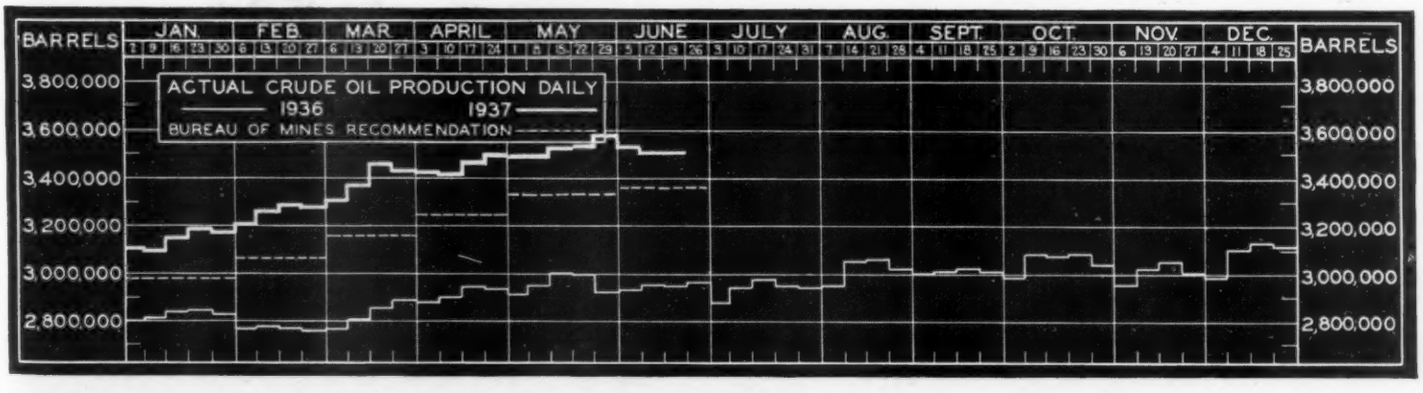
The Mid-Continent situation continues unchanged with most observers agreeing that whatever market weakness there is in the industry centers in that area. More complaints are heard in regard to the action of the Standard of Indiana in reducing tank-wagon prices one-half cent effective June 9. The tankcar shippers with plants in the Mid-Continent are stressing the fact that the reduction in gasoline has reduced their refinery revenue 12½ cents per barrel, based on an average yield of 25 gallons per barrel of crude.

Reflecting the heavy summer demand, gasoline tankcar prices generally are firm. Overhead and residual fuels are strong, with a scarcity of material reported at Atlantic and Gulf Coast points.

Daily Average Production for Week

	June 19, 1937	Bur. Mines June est.	June State allowables	June 12, 1937
Oklahoma City	142,650	.....	.....	168,575
Fitts	97,900	.....	.....	84,225
Remainder of State	391,650	.....	.....	388,025
Total Oklahoma	632,200	625,300	625,300	640,825
East Texas	469,947	.....	.....	469,000
West Texas	196,500	.....	.....	194,249
North Central Texas	105,300	.....	.....	104,899
Texas Panhandle	86,948	.....	.....	77,548
East Central Texas	119,297	.....	.....	122,446
Gulf Coast—Texas	319,800	.....	.....	324,100
Southwest Texas	103,598	.....	.....	103,550
Total Texas	1,401,390	1,354,000	1,351,198	1,395,792
North Louisiana	79,640	.....	.....	78,590
Gulf Coast—Louisiana	174,250	.....	.....	171,250
Total Louisiana	253,890	252,000	254,650	249,840
California	659,200	585,900	603,900	662,250
Kansas	194,350	190,700	190,700	190,625
Arkansas	28,630	28,300	.....	28,050
Eastern Fields	120,300	118,200	.....	119,000
Michigan	42,268	38,400	.....	42,487
New Mexico	115,270	102,000	114,500	114,960
Rocky Mountain area	72,060	71,200	.....	74,290
Total United States	3,519,558	3,366,000	.....	3,518,119

Increase, 1,439 bbls. daily.



SPARKS FROM THE NEWS

Reports indicate that delegates at World Petroleum Congress in Paris last week had few arguments. It is difficult to disagree with a man who speaks another language.

The Bureau of Mines has estimated the July demand for crude oil will average 3,423,800 bbls. daily, which is 57,800 more than the estimated June demand and 453,500 bbls. higher than the actual production for the month one year ago.

Southern Arkansas is no summer resort, but the promising Schuler field and a probable Rodessa extension will cause many oil men to spend the next 60 days in the Sorghum state.

Signs of the time. A large producing company establishes a graduate fellowship in a petroleum engineering school to study problems connected with drilling-mud fluids.

"At long last" it appears that wildcatting in Oklahoma is to show tangible results. Discovery of new pools in four counties is promising.

The natural gasoline market is exhibiting no reverence for precedents. This is the season when it should glide into an unobtrusive slump. But look at it.

Independence Day gasoline consumption is likely to brace up a price structure shaken by the recent tank-wagon cut. So the hopeful glance ahead may indicate something more than interest in hearing the eagle scream.

Without helium gas the dirigible Hindenburg exploded and the skeleton will salvage for less than $12,000. The ship cost millions of dollars to construct.

Many oil men look upon the sale of butane, propane and other liquefied gases as a by-product market of little consequence. In volume and value, however, the sales of these products, formerly wasted or burned as plant fuel, will surpass aviation gasolines this year.

Now that a well in Minnesota, where "there can't be any oil," is nearly full of that fluid, there is hope for several other states where oil is supposed to have sidestepped.

Excessive gas-oil ratios have become the principal concern of operators in the more important new areas, and the Rodessa field is receiving its full measure of study now.

Marketers generally are witnessing an unusually heavy demand for gasoline, and it is hard for them to understand why retail prices have a tendency to sag at several points.

Doctor Egloff suggests in London talk that petroleum not only will furnish fuel for engines of the family car but also, through synthesis, a substitute for rubber tires.

Warmer weather suggests developing cooling units for automobiles, but the automotive engineers report that the average motorist would not be willing to pay for the cost of installation. It will come later.

It was a cheap fuel that never gave any trouble, which carried three from Moscow to America in less than three days.

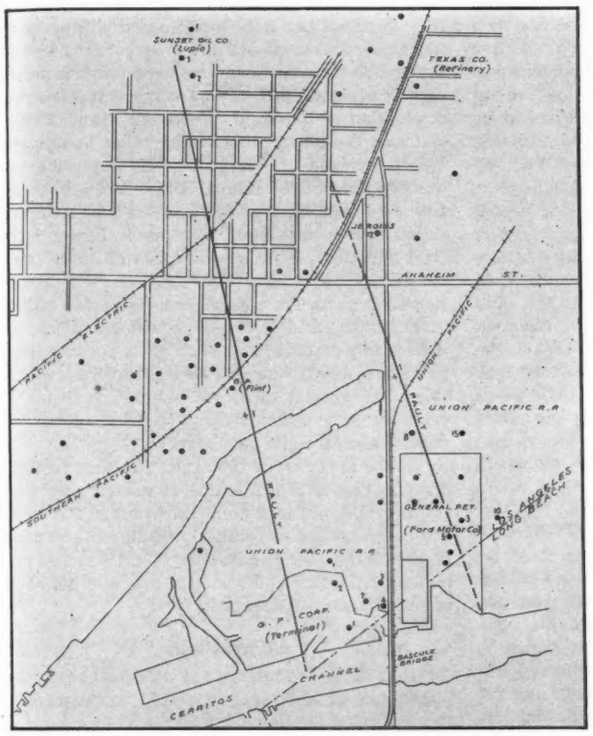
WHAT, ANOTHER TICKET? - - - By Knott

Courtesy Dallas News

Texas reaction to revival of ouster suit against oil companies

Wilmington Area Extended by Vote

By L. P. STOCKMAN



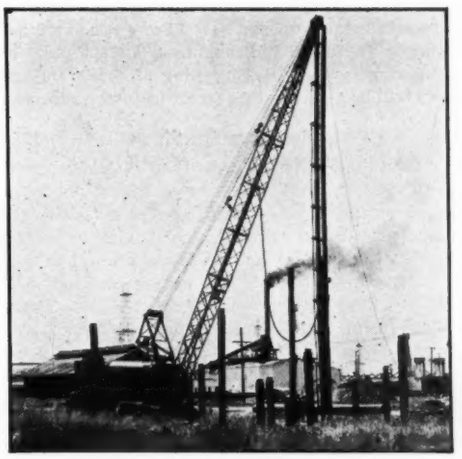
Map of Wilmington area

LOS ANGELES, Calif., June 21.—The potentially productive limits of the Wilmington field were greatly extended June 15 when the electorate of the city of Long Beach voted 7,338 to 6,338 to lift restrictions to permit drilling of one well per acre in the extreme eastern end of the field, which to date has been confined within the corporate limits of Los Angeles because of restrictions in the Long Beach area. The ordinance to be drawn by the city council of Long Beach will authorize drilling of wells west of the center line of the Los Angeles river flood control channel and the present east limits of the Wilmington field. Although only a small proportion of the registered voters voted at the special election, they overwhelmingly defeated an alternate proposal sponsored by the city council for one well to each five acres by a vote of 11,227 to 1,575. Union Pacific Railroad Co., largest single holder of potential acreage, will benefit by lifting restrictions although other operators will participate in drilling.

With the removal of restrictions in the eastern end the productive limits may extend to or beyond the high tide line and thus the legislature or the federal government may enter and authorize or deny development of submerged tidelands. Federal legislation providing that all submerged land outside the mean tide line is the property of the government, is pending at Washington. It is causing several California operators anxiety because after complying with state laws they may be subject to action by the government to clear their titles.

Location

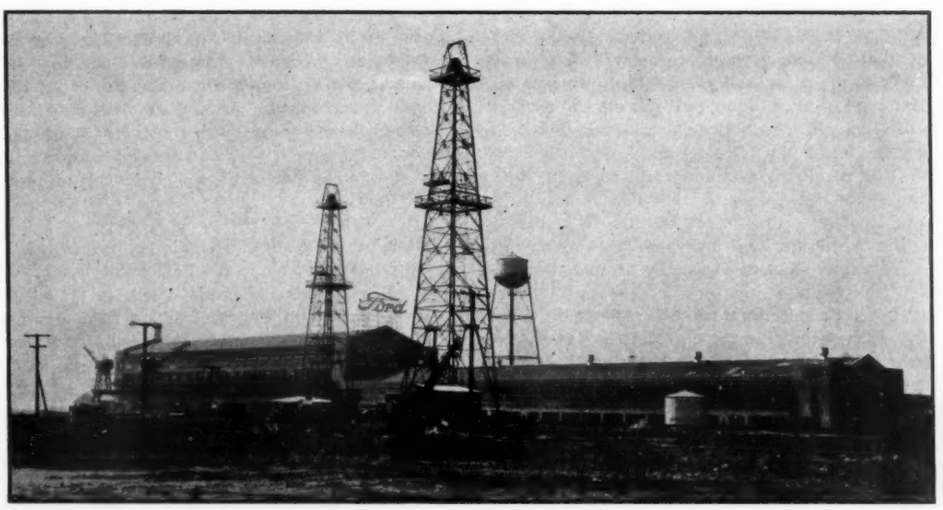
The Wilmington field is approximately 25 miles southeast of metropolitan Los Angeles, 4 miles west of the city of Long Beach and a few miles east and a little south of the Torrance field. There is very little surface evidence of structure as the topography is relatively flat and much of the productive acreage in the drawbridge area has been filled in from dredging in the ship channel. The productive area of the field, which extends from the Watson area in the north to the Cerritos ship channel in the south and from Anaheim Road bridge in the east almost to Broad Street in the west, may be divided into two sections geographically and three sections geologically for comparative purposes. Up to date, development work has been within the city limits of Los Angeles, but with productive wells completed within a few hundred feet of the boundary line between Los Angeles and Long Beach production will likely be secured within the corporate limits of Long Beach now that restrictions have been lifted. If the Long Beach section proves as productive as anticipated, it will greatly enhance the production of the Wilmington field.



Driving pile foundations

Production in the Wilmington field is coming from the basal Pliocene and upper part of the Miocene and while there is much to be learned about structural conditions, the productive area is dominated by two main faults bisecting the field northwest to southeast. These faults have a more northerly to southerly trend than those in other productive fields in Los Angeles Basin, where the general axial trend is more nearly northwest to southeast. It is probable one or more cross faults also exert a considerable effect on the accumulation of oil and gas in this field. The Wilmington field is interesting because of the condition of subsurface strata and the unusually low gas-oil ratio. The two main faults apparently do not fully define the productive limits but do exert a pronounced effect on the productivity of specific areas as crude and natural gasoline production in the northern part of the field is restricted in quantity and shows independent characteristics in the quality of oil.

The field is a rather complex structure due to faulting. The central area indicates a down thrust of about 200 feet along the west fault and a down thrust of approximately 300 feet along the east fault which bisects General Petroleum Corp. Ford Motor Co. lease about midway between wells Nos. 3 and 5. The central fault block between the eastern and western faults, while deeper, contains a greater thickness of Miocene and is more productive. The proximity of General Petroleum Corp. Ford Motor Co. lease to the eastern fault is one reason why this property should show a greater recovery per acre. Additional drilling may change the present

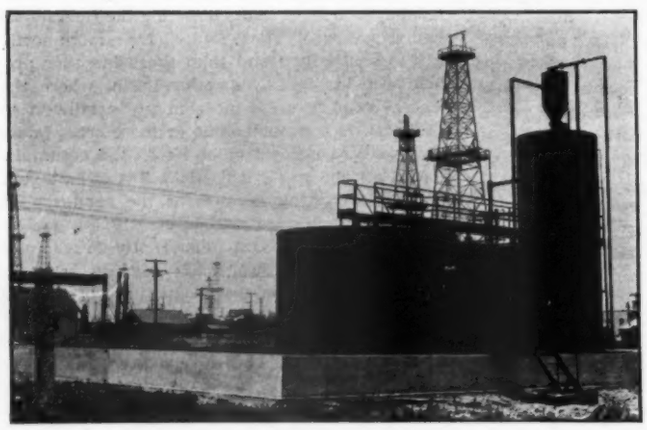


Drilling on Ford property

picture to some extent, especially with respect to the acreage just opened in the Long Beach section. Tangible evidence indicates that faulting plays an important part in the trapping of crude and gas and will be a dominating factor in future recovery.

Refining Qualities

Crude oil produced in the field varies in gravity depending upon the area, and this is an important factor in the sulfur content. However, the quantity and projected injurious effects on equipment because of the sulfur content of the crude has been greatly exaggerated. Crude ranges from approximately 15 to 26 degrees, and is of a mixed base. Wells in the Watson section average around 15 degrees, while those in the drawbridge area adjacent to the assembly plant of Ford Motor Co. average about 21 gravity. Several wells, however, are producing a crude testing 26.1 degrees and one deep well has produced a limited quantity of 30.9 gravity. Crude produced in the Watson section north of Anaheim Road shows a sulfur content ranging from 2.5 to 4.5 per cent, whereas crude produced in the drawbridge area contains approximately 1.9 per cent. A recent analysis of a 20 gravity crude at 60° F. indicates it has a specific gravity of .934 and



Gun barrel tanks

contains 1.66 per cent sulfur by the A.S.T.M. D-129-34 method. After topping the crude to 500° F. and redistilling the tops by A.S.T.M. method D-285-36, to a volume representing 7 per cent of the crude, the resulting gasoline showed an initial boiling point, 102° F. and 8 per cent distilled at 158°, 15 per cent distilled at 176°, 51 per cent distilled at 221° and 94 per cent distilled at 302° The final boiling point was 334° F. and the maximum recovery was 97 per cent. The octane number, A.S.T.M. D-357-34-T, was 72 and the vapor pressure A.S.T.M. D-323-32-T, was 7 pounds. Under actual distillation in an operating refinery, this 20 gravity oil from the same well yielded 15.18 per cent U. S. Motor gasoline, 3.16 per cent gas oil and 80.99 per cent fuel oil. The refinery residuum tested 14.9 degrees and had a viscosity of 135 seconds at 122° F. This residuum contained 1.85 per cent sulfur, approximately the same quantity found in the crude subjected to analysis. Despite the sulfur content of crude in the drawbridge section, it can be successfully refined, especially if mixed with a Santa Fe Springs crude or other light gravity crude containing a minimum of sulfur. Refiners operating entirely on Wilmington crude, however, have been experiencing some difficulty in disposing of residuum because of its sulfur content. Most of those refiners who have been purchasing refinery residuum as cracking stock at prices approximating 65 to 70 cents per barrel have so far declined to purchase residuum from Wilmington crude because its sulfur content.

Estimates of geologists and petroleum engineers made a few months ago gave the Wilmington field an ultimate production of 17,500,000 bbls, but recent developments revealed two dominating faults which govern production and the probability is the total ultimate production should exceed 25,000,000 bbls. Current production has been averaging around 40,000 bbls. per day due to curtailment by General Petroleum Corp., Bankline Oil Co. and Union Pacific Railroad Co., but the field is capable of producing 70,500 bbls. per day with all wells wide open and ample pipe line facilities available. A potential daily production of 100,000 bbls. is expected before the close of August and if a recently discovered third zone proves highly productive, the peak may exceed this figure.

Approximately 1,000 acres have been proved productive in varying degrees, the productivity being governed by its proximity to the drawbridge section adjacent to the Ford lease and the two main faults. Two zones have been found productive and the third appears to show very important possibilities. This third zone discovered by General Petroleum Corp. in No. 3 Ford is being tested by stages. The first and second zones are encountered around 2,500 feet and 3,000 feet respectively, although the top of each varies according to location and the fault block in which development is undertaken. In the drawbridge section, the second zone shows a thickness of about 500 feet and some wells have recorded more than 700 feet. While gas production is relatively low, averaging around 250,000 feet per well per day, the wells show a good kick and respond with little artificial stimulation.

Drilling Program

Steam drilling is used almost exclusively and the derricks for the most part are steel. After completion some operators remove the rigs to other areas. In all cases the rigs are skeletonized and reduced to a minimum. This field is unique in that operators have found it necesary to take unusual precautions to minimize sand trouble. Most wells produce a fine grained powdery sand in addition to the usual large grained sand, and operators have found it necessary to vent the gas through a gun barrel and each storage tank has a special venting chamber on top of the tank. These special precautions are necessary to prevent producing wells from abnormally filling storage facilities with the settling sand. It has been found advisable to screen in with sheet iron all derricks near the Ford plant and near thoroughfares and the ship channel. The drilling practice consists of landing 18⅝-inch surface pipe around 200 feet and finishing the hole with a combination string. Some operators land a regular water string and complete the hole with a 6⅝-inch or 8⅝-inch perforated liner.

Natural Gasoline Plants

General Petroleum Corp., discoverer of the Wilmington field and one of the largest holders of productive acreage in the district, has leased 10 acres from Union Pacific Railroad Co. and has started construction of the first casinghead plant in the field. The company has had to enlarge its tentative plans twice due to rapid growth of the field and at last reports preparations are being made to handle a maximum of 40,000,000 feet of gas per day. About 25,000,000 feet of gas is either being blown to the air daily or held in check by curtailment operations. Tentative plans have also been made for another natural gasoline plant to be erected in the Wilmington field, but the sponsors are holding plans in abeyance pending developments. The Wilmington field does not offer as remunerative profits to operators of natural gasoline plants as some other Los Angeles Basin fields due to the relatively low yield of gas per barrel of crude. The average well in Watson area produces about 100,000 feet of gas per day, while wells in the drawbridge area produce approximately 300,000 feet. Natural gas content ranges around 1.2 gallons of gasoline to each 1,000 feet.

Curtailment

Operators in the Wilmington field, with few exceptions, have not conformed with the curtailment program except as they have been unable to move current production. Due to the failure to curtail, none of the major buyers have provided pipe line facilities into the field and will probably not do so until some definite program is approved. General Petroleum Corp. has been moving out its own production and is also transporting current production of Bankline Oil Co. and Union Pacific Railroad Co. either for itself or other buyers and is not expected to enlarge its field gathering system. Because of the failure of operators to formulate a curtailment program none of the marketing companies has made purchase commitments in the field and there is no standard posted price. As a result, operators have been disposing of production all the way from 36 cents to 50 cents a barrel.

Edington Oil & Refining Co. has announced intention of posting a price of 55 cents per barrel for 17 to 18.9 gravity oil and 60 cents per barrel for 19 to 20.9 gravity oil in the western end and 60 cents for 17 to 18.9 gravity, 65 cents for 19 to 22.9 gravity and 70 cents per barrel for 21 to 22.9 gravity in the area east of the fault. The field justifies a flexible price schedule due to the varying quality of crude, but it is doubtful whether the crude can be graded and classified according to the point of production. As a matter of fact, there are two major dominating faults and the proposed schedule must be made more specific.

Completions

Up to June 20 a total of 134 wells had been completed and an additional 75 should be finished before the close of August. It may be a few weeks before ordinances are completed to permit drilling in the Long Beach section. Vice president William Reinhardt of Union Pacific Railroad Co. has laid down a program which provides that all property of the company will be safeguarded against drainage by aggressive drilling. This company, due to its extensive holdings has been kept busy drilling necessary offsets. It has sublet most of its development to contractors but is purchasing the derricks, pipe and some other equipment through its own purchasing department.

Texas Production Hearing

AUSTIN, Tex., June 21—Nominations for Texas crude in July totaling 1,623,636 barrels daily were reported at the proration hearing June 18, a decrease of 22,189 barrels from June. This is 248,536 barrels more than the Bureau of Mines estimate for July, which is 1,375,100 barrels, or 20,700 barrels over its June estimate.

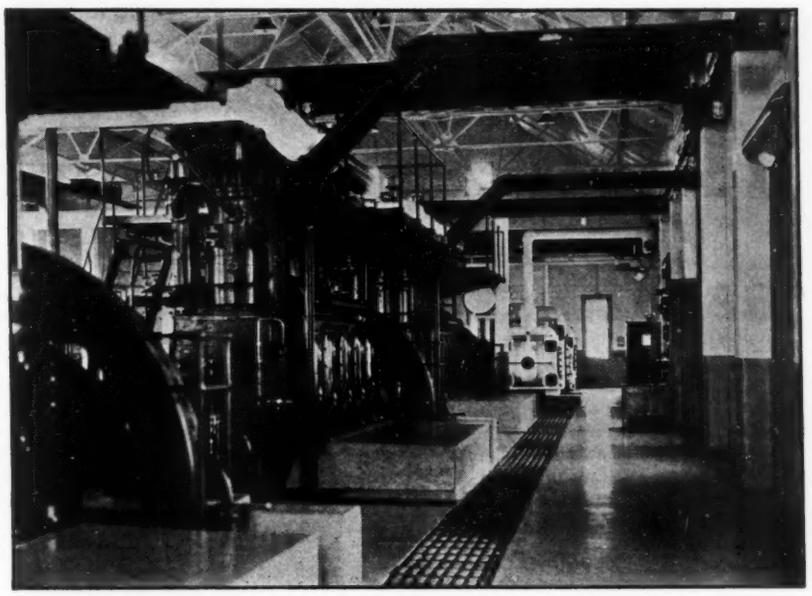
Allowable production June 17 was 1,407,562 barrels. Allowable production up to June 17 increased 57,300 barrels over June 1 allowable which was 4,138 bbls. under the bureau's June estimate.

Laten Stanburry, director of the oil and gas division of the railroad commission, presided in the absence of the commissioners.

The bottom hole pressure of the East Texas field June 12 was 1,163.26 pounds, a decrease of 1.5 pounds in 30 days.

Repowering Trunk Pipe Line, New Mexico to Houston

By NEIL WILLIAMS



Interior of pump station

HOUSTON, Tex., June 21.—A construction project involving complete repowering of its trunk pipe line from southeastern New Mexico and West Texas to Houston has been started by Texas-New Mexico Pipe Line Co. Capacity of the line will be increased from 30,000 bbls. daily to 75,000 bbls. daily.

Texas-New Mexico Pipe Line Co., with ownership held by Texas Corp., Consolidated Oil Co., Tide Water Associated Oil Co. and Empire Oil & Refining Co., recently acquired the line from Texas Pipe Line Co. The greater capacity is being required to handle the combined production of these companies and their connections in the Permian Basin.

Plans call for building of nine new stations and redesigning and enlarging of the three stations now serving the line. The new stations will replace stations abandoned several years ago, when reduced line capacity needs of Texas Pipe Line Co. out of the Permian Basin resulted in removal of equipment to lines out of East Texas, where additional outlet then was desired.

Construction at this time is being concentrated on new stations at Monahans, Ward County; Ozona, Crockett County, and Junction, Kimble County. Addition of these stations, scheduled to be completed August 1, will raise the capacity to 41,000 bbls. daily. The other stations, which will boost the capacity another 34,000 bbls., are expected to be in operation by November 1.

Locations of former stations are being disregarded as sites for the new stations, which are being put at points which will provide more effective distribution of power. Only two stations, Iraan, Pecos County, and New Ulm, Colorado County, are being rebuilt on sites of abandoned stations. One station, formerly at Segovia, Kimble County, is being eliminated.

Originally, the line, placed in operation by Texas Pipe Line Co. in July, 1929, had 13 main line stations. At that time the line had a rated capacity of 60,000 bbls. daily. The fact that capacity will be increased by 15,000 bbls. daily is attributed largely to more effective power distribution.

Under the new distribution of stations, that at Monahans, under construction, is 1½ miles west of the original station. The Ozona station, Crockett County, has been moved 1¾ miles east. The new Sonora station, Sutton County, will be a little less than 8 miles west of the first station. Junction Station, Kimble County, is being built about 4 miles east of the abandoned station, while the Fredericksburg station, Gillespie County, has been moved 12 miles west.

The former main line station at San Marcus, Hays County, will be replaced with a new station about 16 miles west to be called the Blanco station. A small booster station at San Marcus will continue to operate. San Marcus is a junction for a 6-inch line which serves Texas Co. refinery at San Antonio. The abandoned Brookshire station will be replaced by a new station at Katy, Waller County, 7 miles east.

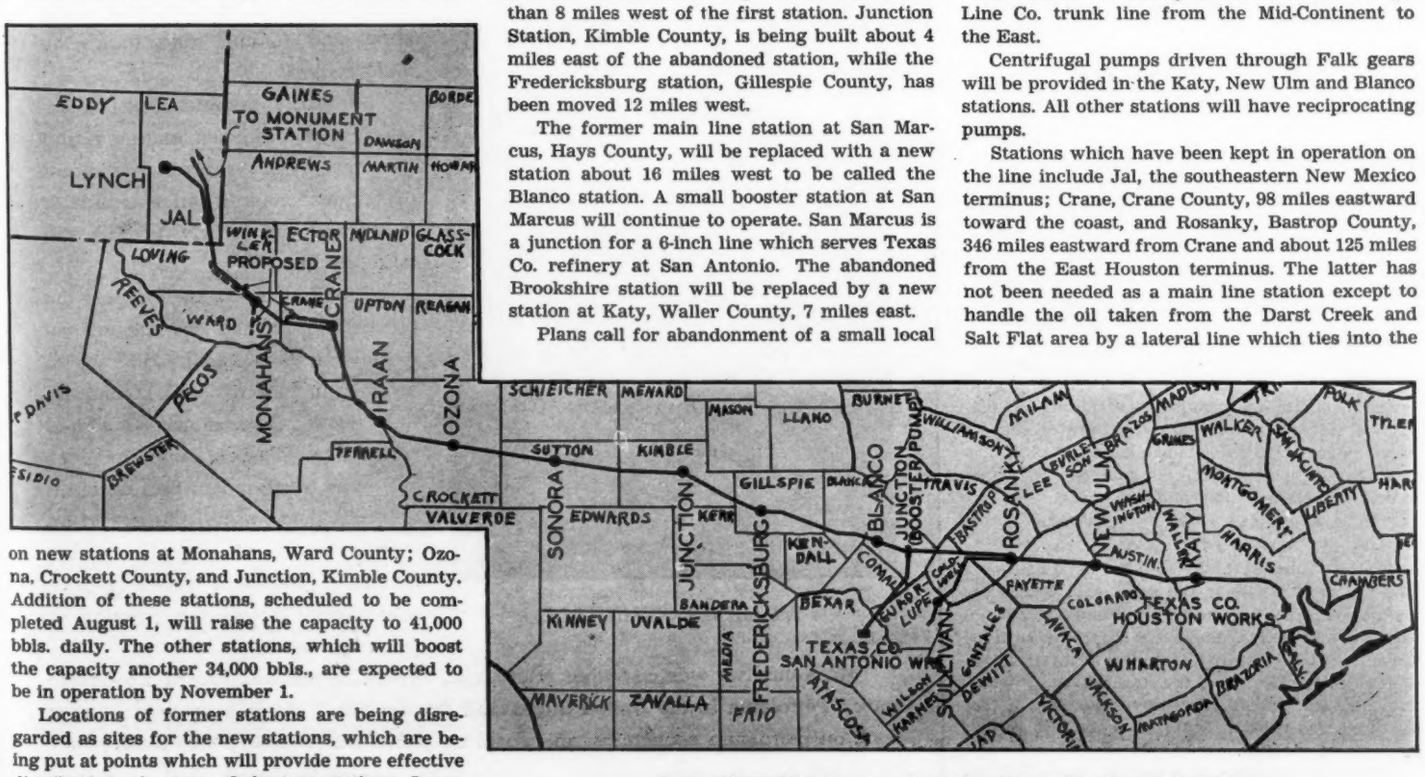
Plans call for abandonment of a small local station at Wink, between Jal and Monahans.

Except for Jal, which is a combination diesel-gas engine station, all stations in the new setup will be entirely diesel powered. Originally, the only diesel stations, except Jal, were those at Iraan, Junction and Rosanky. Electric power was utilized at the other stations.

Twelve hundred horsepower will be provided at each station, either in the form of two 600-hp. or three 400-hp. engines. At Jal two additional 300-hp. gas engine driven units will be installed. The latter equipment is being moved in from Texas Pipe Line Co. abandoned Starr station on its East Texas system. The majority of equipment for the other stations is coming off Sinclair Prairie Pipe Line Co. trunk line from the Mid-Continent to the East.

Centrifugal pumps driven through Falk gears will be provided in the Katy, New Ulm and Blanco stations. All other stations will have reciprocating pumps.

Stations which have been kept in operation on the line include Jal, the southeastern New Mexico terminus; Crane, Crane County, 98 miles eastward toward the coast, and Rosanky, Bastrop County, 346 miles eastward from Crane and about 125 miles from the East Houston terminus. The latter has not been needed as a main line station except to handle the oil taken from the Darst Creek and Salt Flat area by a lateral line which ties into the



Texas-New Mexico pipe line showing new station locations

main line at that station. Locations of these stations are not being changed, but increased pumping capacity is being added at each. Crane, at present an electrically operated station, is being converted to diesel power.

In addition to the station construction project, 40 miles of 12¾-inch O.D. loop on the trunk line and 11 miles of 6-inch lateral line from the Monahans station to the South Ward area will be laid. The main line consists of 472 miles of 12-inch pipe from Crane station to East Houston and Sinclair station, the tidewater terminus, and more than 97 miles of 10-inch pipe from Crane westward to Jal. The 12¾-inch loop will be laid on the 10-inch portion, 19 miles being between Crane and Monahans, and 21 miles from Crane westward.

Revive Texas Ouster Suit as Antitrust Law Upheld

AUSTIN, Tex., June 21.—A decision by the Texas Supreme Court upholding the state antitrust law has reopened the famous ouster suit instituted by Attorney General James V. Allred, now governor, against 15 oil companies and two oil associations for alleged violation of the state antitrust law. The suit, based largely on the code of marketing practices, asked forfeiture of charters to do business in Texas and $17,500,000 in penalties.

Named as defendants were the Standard Oil companies of New Jersey, New York and California, Shell Union Oil Corp., Humble Oil & Refining Co., Texas Co., Gulf Refining Co., Pasotex Petroleum Co., Continental Oil Co., Sinclair Refining Co., Magnolia Petroleum Co., Sims Oil Co., Shell Petroleum Corp., Cities Service Oil Co., Texas Pacific Coal & Oil Co., Texas Petroleum Marketers Association and American Petroleum Institute.

A Travis County district court sustained a demurrer of defendants that the National Recovery act superseded the antitrust laws, and later the Austin court of civil appeals, holding that the laws were unconstitutional because they exempted farmers and stockmen, dismissed the case.

Pointing out that the exemption was in the penal code, not in the civil, the Supreme Court said, in effect, that a provision which might invalidate the former had no bearing on the latter. It also overruled a contention that exemption of cooperative associations under what is known as the cooperative marketing act made the antitrust laws unconstitutional.

"We have concluded," the opinion by Chief Justice C. M. Cureton said, "the court of civil appeals was in error in holding the antitrust laws void; and we also are of the opinion that the insistence the existence of the cooperative marketing act renders the antitrust laws invalid is without merit."

It said the code furnished a "basis for an actionable charge against the defendants" and some of the provisions "on their face are strongly suggestive of a violation of antitrust statutes." The opinion named certain provisions as restricting installation of filling station equipment free of charge, agreeing as to charges for installations, prohibiting a plan under which a refining company or wholesaler would lease stations and forbidding donations of money in connection with the purchase of petroleum products.

To the argument the Federal Trade Commission had approved the code, the court said that body had no authority to regulate intrastate business in petroleum in Texas, and even if it attempted it the action could not invalidate the antitrust laws.

It rejected claims that the state before bringing an ouster suit should first prove violation of the laws and also ruled it could move against all defendants in one suit.

Effort of the state to attach certain stock of Standard of New Jersey, Socony-Vacuum Co. and Standard of California, the opinion said, was without statutory authority because those companies were foreign corporations and had no permits to do business in Texas. The stock was held in the Humble Oil & Refining Co., Magnolia Petroleum Co. and the Pasotex Petroleum Co.

A cross assignment contended the state's petition showed a misjoinder of parties and causes of action. The court held it to be without merit, for under the conspiracy charge "if proven, each of the defendants in error is responsible for all acts done by any of the conspirators in furtherance of the unlawful combination."

Further, the court said: "In view of the general object of the antitrust laws effectually to suppress monopolies, it is plain to us that the purpose of the state in this action is to suppress the wrong of the defendants in error in entering into a combination to violate and in violating the antitrust laws of the state, and that this basic purpose is the state's primary cause of action."

Another cross assignment related to the late entry of the Sinclair Refining Co. and was overruled, the court holding "this company is sued as a coconspirator with the other defendants in error, and having once entered the conspiracy, however late, becomes in law a party to every act previously or subsequently done by any of the others in pursuance of it."

The decision returned the case to a Travis County district court, in which it originated in January, 1932, for trial under certain restrictions stated by the high court.

The companies have 15 days for filing a motion for a rehearing. An appeal to the Supreme Court of the United States may not be entertained until the case has been tried on its merits.

Attorney General William McCraw said the suit would be pressed vigorously and added that the "true significance lies in the fact the suspension of antitrust laws for the past three years has led to the development of many practices that are highly improper."

Kemnitzer to Write Exclusive Articles for Journal During Visit to Russia

WILLIAM J. KEMNITZER

What is the present status of Russian oil operations?

What is the oil future of the U.S.S.R., believed by many to have larger reserves in that vast European and Asiatic area than any other nation?

William J. Kemnitzer, of Los Angeles, widely known engineer and geologist, will answer these and other questions in a series of articles to appear exclusively in The Oil and Gas Journal.

The first article will report the proceedings of the seventeenth International Geological Congress to be held in Moscow and Leningrad, July 20-29. Discussions concerned with the world's petroleum resources will have a prominent part and will be brought to Journal readers in an interpretive news report by Mr. Kemnitzer who will arrive in Moscow shortly before the opening of the congress.

Mr. Kemnitzer was co-author with Ralph Arnold of the well-known 1,000-page book, "Petroleum in the United States and Possessions." He is now completing a book on petroleum economics which will be published following his return.

Twentieth Birthday of Humble Recalls Remarkable Growth

By NEIL WILLIAMS

HOUSTON, Tex., June 21—Twenty years ago, June 21, Humble Oil & Refining Company began its career as a corporate entity. On that date its charter was received from the state of Texas marking its official recognition as a duly organized corporation to conduct business as a producer, refiner and marketer of oil. The date proved to be the birthday of a company destined to become one of the outstanding oil companies of the world.

Started as a modest $4,000,000 corporation, the company has enjoyed a growth of phenomenal proportions. After a span of 20 years, it has a present capitalization of $175,000,000, and its operations and properties spread over Texas, southeastern New Mexico, southern Louisiana and eastward across Mississippi. It has had important holdings in North Louisiana, Arkansas and southern Oklahoma but disposed of these to allied companies operating in those districts in order to confine its operations to its present territory.

Daily average net production of the company has been boosted from around 8,000 barrels to above 140,000 barrels. Considering the open flow practices followed generally at the time the company was formed, the present production, restricted by proration and a desire for conservation, is of particular significance.

In addition to its own production, the company purchases an average of approximately 180,000 barrels of crude daily. This places the company in a position of being a larger buyer of crude than a producer. Daily average crude runs through lines of Humble Pipe Line Company total more than 415,000 barrels.

Refining Facilities

From a 300-bbl. skimming plant which was a part of the original properties of the company, but was abandoned a short time after the company was organized, refining facilities have been expanded to provide a daily crude charging capacity of 156,000 barrels from four operating plants. Cracking facilities included at two of the plants add an additional 100,000 barrels capacity. Nine gasoline plants having a present daily recovery of 115,000 gallons are operated.

When the company was organized it had no pipe lines. Today, its transportation system, operated through Humble Pipe Line Co., extends to all parts of Texas and southeastern New Mexico and comprises a total of more than 6,500 miles of main and gathering lines. Thousands of barrels of crude and refined products are handled daily over the company's loading terminals and moved by tanker in coastwise and export trade.

The company's pay roll has grown to include more than 13,000 names. More than 1,650 employes are in the headquarters offices at Houston.

Organization of Humble Oil & Refining Co. had its inception with the merger of interests and properties of a number of leading groups of independent operators. Most of these properties were concentrated in a few Gulf Coast fields. These operators had concluded the best way to establish a satisfactory market for their production would be to pool their interests. They had learned that large refineries and other desired buyers were not willing to take their oil without assurance of a regular and adequate supply. This, these operators individually could not guarantee.

Preliminary negotiations and steps for the consolidation of interests of these various independent operators were started late in 1916. Negotiations, however, were not concluded until February, 1917, when these operators met and definitely agreed upon an organization and the valuations of their respective properties to be put into the new company. It was decided that the organization be made effective March 1, 1917, and that general operations be started at that time. The merger of operations became official on June 21.

Units in Merger

Comprising the various interests taken over by the newly organized Humble Oil & Refining Co. in the merger were:

Humble Oil Co., owned by R. S. Sterling, who became first president of the new company, Frank Sterling, Miss Florence Sterling and other members of the Sterling family. An interest was owned by Charles Goddard, who was in charge of the company's operations in the Humble field. The company had been organized in 1911. Its principal production was in the Humble field although it had properties in other coastal fields. This com-

R. L. Blaffer, chairman

H. C. Wiess, president

prised the largest single group taken over in the merger, and from it the name of the new company was taken.

The firm of Blaffer & Farish, composed of R. L. Blaffer, present chairman of the board of Humble Oil & Refining Co., and W. S. Farish, former president, but now president of Standard Oil Co. (New Jersey). These men had been associated since the early days of Spindletop. Their properties were located in various coastal and North Texas fields with the largest holdings in the Humble field.

Paraffine Oil Co. and Reliance Oil Co., owned by the Wiess family of Beaumont and represented by H. C. Wiess, now president of Humble Oil & Refining Co. These companies had properties at Spindletop, Batson and other coastal fields, as well as in Oklahoma.

Schultz Oil Co., owned by Blaffer & Farish, and L. A. Carlton (deceased), Ed Prather and Bert Broday.

Ardmore Oil Co., owned by the Wiess and Sterling families. Properties of the company were largely in Oklahoma.

Fondren Drilling Co., owned by W. W. Fondren, who became a vice president of the new company. Mr. Fondren not only was engaged in the drilling contracting business but owned production and leases, mainly at Humble.

Globe Refining Co., owned by Blaffer & Farish, Paraffine Oil Co. and S. P. Farish. This company owned and operated a 300-bbl refinery at Humble. The plant, however, was run on the production of a freak well and when this well went dead a short time later the plant was shut down. Gasoline from the plant was marketed locally by truck.

Holdings of J. C. Wilson, independent operator of Beaumont, also were taken over in the new company.

Legal phases of the consolidation were handled by E. E. Townes, now a vice president and director of Humble Oil & Refining Co., and L. A. Carlton (deceased) his law partner, who became a director of the new company. It was decided to incorporate under the "Texas Company Bill," just passed by the legislature, as its provisions seemed to fit the circumstances. The bill was not to become effective until June 20, 1917, so, although the organization of the new company was operative March 1, the charter could not be obtained until June 21.

From March 1 to June 21, operations were carried on under a "gentleman's agreement" as a joint enterprise in which the various owners received an interest in proportion to the value of the properties each had contributed. Reflecting the confidence each participant held for the others, the organization of the company, including details of evaluations of the respective properties, was perfected entirely by verbal agreement. It was not until May 8, when an affidavit in connection with the issuance of the charter had to be made to the secretary of state setting forth the facts of the agreement, that anything was put in writing.

Although the new company was capitalized at only $4,000,000, properties put into the company were valued at $7,340,000. The properties were largely producing holdings. When the little refinery at Humble was abandoned the company was left without any refining business.

In July, 1917, the company purchased the old Dixie refinery at San Antonio, which had a capacity of 1,000 bbls. daily. The Burkburnett field had just come into production, and getting a flood of oil with no pipe line, no refinery and no customers, the company decided to take over the San Antonio plant and operate it on Burkburnett crude, shipping the crude by tankcar. However, when the Somerset field, near San Antonio, came in, a competitor operating on crude from that field was able to make gasoline cheaper than Humble Oil & Refining Co. so the company got out of the refining business at San Antonio. Later, the plant was reopened.

The first pipe line was a 3-mile line from Goose Creek, to a little loading rack on Hog Island, operated as the Southern Pipe Line Co. This was originally owned by Mills Bennett, independent operator, but was purchased by R. S. Sterling in December, 1916, together with crude contracts the company had. Increases shortly after in prices of coastal crude made this a profitable investment. The line and company later were turned into the properties of Humble Oil & Refining Co.

Headquarters of Humble Oil & Refining Co. in Houston, Tex., where 1,650 persons are employed

In 1917 the company laid a 9-mile line from the Burkburnett field to Iowa Park and put in a small loading rack. This with the small line and loading rack serving the Goose Creek field formed the nucleus for the present pipe line system. The first through line was laid from the Ranger field to the Gulf Coast in 1919.

It was during the Ranger boom in 1918 that Standard Oil Co. of New Jersey entered the picture. In the boom, Humble Oil & Refining Co. purchased so many leases it did not have enough money for drilling and development in accordance with terms of the leases. About the same time, West Columbia on the Gulf Coast came in and took a lot of the company's money. Faced with the necessity of getting money, a deal was made with Standard Oil Co. of New Jersey in which the latter paid $17,000,000 for $4,000,000 worth of Humble stock. Capital stock of the company was increased from $4,000,000 to $8,200,000, which left the original owners with $4,200,000 worth of stock.

All the $17,000,000 was placed in the company treasury, and used to develop the company's properties at Ranger; laying the pipe line from Ranger, started in 1919; enlarging the Baytown refinery, started a short time before; and for the company expansion enterprises.

Present directors of the company are: R. L. Blaffer, H. C. Wiess, E. E. Townes, James Anderson, John R. Suman, Hines H. Baker and L. T. Barrow. Wallace E. Pratt recently resigned as vice president and director to assume duties at New York as a member of the executive committee and director of the Standard Oil Co. of New Jersey.

Officers or the company are: Mr. Blaffer, chairman of board and treasurer; Mr. Wiess, president; Mr. Anderson, Mr. Townes and Mr. Suman, vice presidents; F. O. Freese, secretary and assistant treasurer; James S. Crate, assistant secretary and assistant treasurer; H. Millsapps, M. B. Fox, and Robert G. Knopf, assistant secretaries; L. H. Attwell, Jr., comptroller; George R. Cooke and Paul Millsapps, assistant treasurers; R. C. Huder, cashier, and L. P. Marshall, assistant cashier.

Byles and Gallagher Speak at Findlay, Ohio, Celebration

FINDLAY, Ohio, June 21.—Axtell J. Byles, president of the American Petroleum Institute, and R. W. Gallagher, vice president of the Standard Oil Co. of New Jersey, were speakers at Findlay's "Golden Celebration of Oil and Gas" exercises here to dedicate monuments erected at two of the important early wells in the development of the local gas field a half century ago.

"Many years ago I heard the story of the purchase of a large part of the Lima-Findlay field from one of the two men who had gone to New York to confer on the matter.

"You will recall that this was the first field discovered in which petroleum was impregnated with sulfur. No means of satisfactorily refining it had then been found and the oil was selling for 15 cents a barrel. After considerable discussion, it was the consensus of the meeting that no purchase of lands or leases in this field should be made. John D. Rockefeller was presiding at that meeting and at its conclusion requested two gentlemen to whom I have referred to remain. He then pointed to each available property on the map and said, 'Buy that, buy that.' When our friends referred again to the refiners' inability to handle the crude, Mr. Rockefeller replied, 'We will find a way.'

"Years after when your beloved fellow citizen, the late J. C. Donnell, had made the Ohio Oil Company the greatest of the Standard producing units, and it was decided to move its headquarters to New York, the Commodore was asked to select his offices at 26 Broadway. To this request he replied that he would not bother to select the offices as he was remaining in Findlay. The significance of that reply need not be amplified to any citizen of Findlay. Had it been otherwise, few of you would be here today."

Mr. Gallagher told of the benefits which have been derived through the extension of pipe lines in the United States and paid tribute to the oil and gas pioneers who made possible the drilling of the Karg and the Oesterlen wells.

O. D. Donnell, president and general manager of the Ohio Oil Co., which this week is celebrating its fiftieth anniversary, was host at a luncheon at Findlay Country Club, which was attended by approximately 100 persons who have been instrumental in some manner of carrying on the oil and gas industries in northwestern Ohio during the last half century.

Stripper Well Association Offers Views

Nominating committee of National Stripper Well Association: Carl Weiner, Chanute, Kans.; John Rebold, Okmulgee, Okla.; S. C. Granger, Duncan, Okla.; W. W. Warner, Nowata, Okla.; W. A. Goforth, Tulsa

The National Stripper Well Association held its annual meeting in Tulsa on June 17. It was attended by 75 representatives of small-well owners of Kansas, Oklahoma, Texas, Illinois and Indiana, who conducted an all-day meeting in the Mayo Hotel, discussing their problems and making plans for the coming fiscal year.

William Bell, of Robinson, Ill., president of the association, was in the chair. Illness made it necessary for Harold B. Fell, executive vice president of the association, to be absent.

President Bell's opening statement to the convention was a protest against recently taken action to reduce the price of gasoline by certain major as well as smaller distributors.

"Such a step cannot but react on the crude situation and bring about a delay in the advance in price we of the producing division have earned and need so badly," said Mr. Bell. "Present prices of crude are now at least 30 to 40 cents per barrel lower than they should be to enable stripper well producers to meet expenses and provide for necessary outlays to inaugurate improved recovery methods to the end that the reserves under stripper well properties may be made available," the speaker added.

Mr. Bell said there was no demand for lower prices on the part of the public and that prices are too low now, offering as they do an excuse for higher gasoline taxes which are explained as logical because gasoline is sold so cheaply.

Later in the morning session Mr. Bell called attention to the fact that legislation has been introduced in congress to provide for a 40-hour week and a minimum wage of 40 cents per hour. "If such legislation is adopted it should include a provision giving the enforcing authority power to make exceptions to provide for prevailing conditions in the stripper well industry," he said.

The committee on resolutions discussed the matter of legislation on wages and hours, and recommended that the association protest the extension to stripper production of the proposed labor provisions, and demand that stripper wells be excluded from these provisions, and that a separate classification be set up in any labor legislation affecting the oil industry to make possible the continued operation of these properties.

The committee in its preamble to the resolution related that there are 280,000 stripper wells in 26 states making an average of a 1 to 1¼ bbls. per well, for which the producers receive an average price of about $1 per barrel and that the labor costs for the operation of these wells must of necessity be restricted to a point below the amount of income these wells produce in order to prevent the early abandonment of the wells, with the attendent loss of employment to thousands of men of advanced years and the wastage of a great recoverable oil reserve.

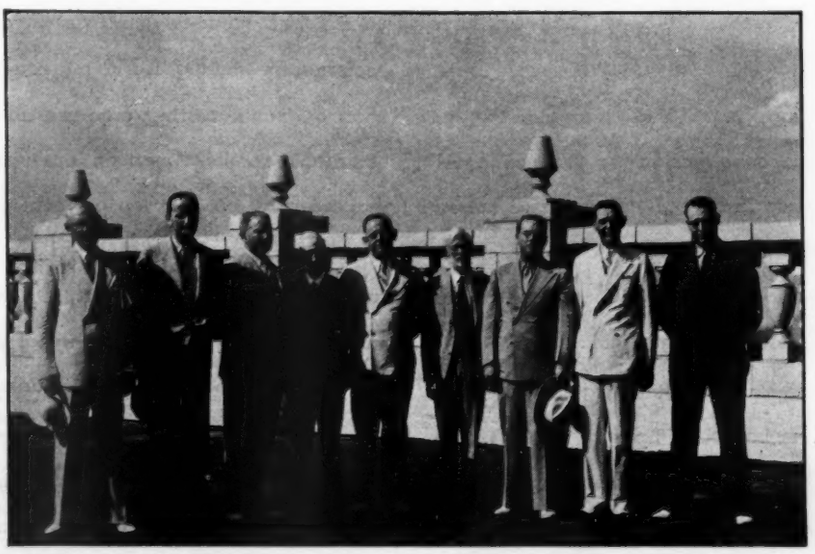
Depletion Allowance

The convention served notice that the association would protest vigorously any attempt on the part of the present congress to eliminate the 27½ per cent depletion allowance now embodied in the federal revenue act. The committee on resolutions brought out the fact that the depletion allowance is in effect a simplification of a provision of former revenue acts; that its purpose was to relieve the hazardous oil industry of excessive taxation by accepting the fact that relatively high incomes in one year may have been, and actually have been, the result of extremely heavy capital losses sustained in prior years. In the opinion of the committee the elimination of the 27½ per cent depletion allowance provision would remove from the industry the protection heretofore accorded it from excessive taxation in profitable years without offset for losses at other times. The committee's report was adopted.

The excellent record made by President William Bell in his year of service as president of the association called for a rising vote of commendation and Executive Vice President H. B. Fell was given a vote of thanks for his successful endeavors, to which was added the expressed hope that he would soon recover his health, which had been impaired by overwork.

William W. Warner, of Nowata, Okla., a pioneer in the organization of stripper well operators, was elected president for the ensuing year. Harold B. Fell of Ardmore, Okla., was reelected executive vice president, and six regional vice presidents were chosen as follows: Oklahoma, Will H. Smith, Ardmore; Kansas, Carl Weimer, Chanute; Illinois, T. P. Steele, Robinson; Pennsylvania, New York and West Virginia, W. J. Brundred, Oil City, Pa.; Texas, C. J. Tucker and P. B. Flynn, Wichita Falls.

It was decided to hold the 1938 meeting of the association in Tulsa, but President Warner recommended frequent regional and local meetings and a strong and aggressive action whenever the interests of stripper well operators are endangered.



Officers and resolutions committee: C. J. Tucker, Wichita Falls, Tex.; A. B. Morris, Tulsa; William Bell, Robinson, Ill.; G. W. Strawn, Ardmore, Okla.; C. E. Buchner, Tulsa; Guy T. Berry, Independence, Kans.; Oras A. Shaw, Tulsa; J. R. Simpson, Tulsa; H. W. Burlingame, Bartlesville, Okla.

Houston Oil Show

Arrangements have been made with railroads throughout the United States for a reduction in rates to oil men attending the Oil-World Exposition in Houston, Texas, October 11-16.

Special certificates are necessary to secure the reduced fares. The certificates can be obtained from E. G. Lenzner, general manager, Oil-World Exposition, Inc., Petroleum Building, Houston.

the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

World Situation

The proceedings at the World Petroleum Congress in Paris emphasize anew the international character of the oil industry and the world's increasing dependence upon petroleum products.

Domestic producers in the United States are too much inclined to believe that all the expansion and growth in the petroleum industry is within the borders of this country. That, of course, is not the case. There has been expansion abroad in both the production and consumption of petroleum in recent years as remarkable as there has been here.

While the United States will establish new records in production during 1937 so also will the U.S.S.R., Venezuela, Rumania, Peru, and Iran, which rank, in the order named, after the United States as oil producing countries. The Near East, including Bahrein Island, is developing importance and modern refinery processes have made that area a factor in world supply.

Expansion of world markets for petroleum is even more notable than the developments in production. Although the U.S.S.R. has increased its output to a new peak it will have only a small supply for export owing to the remarkable increase in demand for domestic uses in practically every phase of consumption.

This virtual withdrawal of Russia as a competitor in outside markets has been an important factor in the world petroleum situation, which immediately reflects the fluctuations of supply and demand in any section of the globe.

The steady development of Iraq, Iran, Bahrein Island, and the Netherlands East Indies is contemporaneous with the growing demand for petroleum products in Asiatic countries, a further demonstration of the universal demand for oil which must continue to expand with the progress of civilization. Petroleum is, without question, the most sought for mineral of all time.

The United Kingdom and several European countries will consume more this year than ever before and the problem of where they can get it has become one of the gravest questions agitating modern statesmen.

Such oil-powered feats as the transpolar flight of the Russian aviators from Moscow to Vancouver, the "just-for-fun" globe circling tour of Amelia Earhart, the transpacific clippers and the projected transatlantic service are keeping the world oil-minded.

The world petroleum picture is changing so rapidly that in our own interest we must keep constantly in touch with what is going on beyond our shores. The continually shifting world markets affected by production or manufacturing progress abroad have important bearings on the American producer and refiner. Our exports may be only ten per cent of our production but anything that affects that ten per cent may rebound upon our entire 100 per cent. Oil is a world-wide commodity and any merely provincial or local view of it is very likely to be not only misleading but costly.

If the World Petroleum Congress can be brought to Tulsa during the International Petroleum Exposition of 1940 it will offer American oil men a valuable opportunity to exchange experiences with the men who are engaged in the same enterprises abroad and with mutual advantage.

Europe Seeks More Crude From the United States

By DR. C. K. FRANCIS

PARIS, France, June 19 (by cable). European refiners, particularly in France, would like to buy more crude in the United States from sources which are in a position to assure adequate supplies over a long period.

The desire to enlarge purchases of American crude was one of several facts of international significance developed here this week during the sessions of the World Petroleum Congress. Technicians and economists from all parts of the oil world attended the congress which closed here today and it was apparent that the problem of future supplies was uppermost in the minds of most of them.

The European situation received special attention following an address by Colonel E. O. Thompson, member of the Texas Railroad Commission and a leading authority on oil operations in the United States. In his talk, Colonel Thompson referred to the vast oil reserves which have been discovered in the Mid-Continent and the Gulf Coast and indicated that additional outlets outside the United States would be welcomed.

The discussion revealed that several refiners who have built plants in France in recent years do not have adequate and assured supplies and the same situation exists among the independent operators in other European countries. French comment was to the effect that supplies in the United States were to a large extent in the hands of major companies which have affiliated or subsidiary oil interests in Europe and which for that reason would not sell crude to independent European refiners.

Colonel Thompson assured them that independent producers in the United States had large reserves and were in position to supply their needs. It was suggested that proration schedules in the United States be boosted so that the crude supplies would be available on long time contracts to buyers outside the United States.

This situation reflects the fact that the demand for petroleum is increasing rapidly in European countries. Exports from the U.S.S.R. are decreasing despite the increased output due to the increased Russian domestic requirements. The supplies available from Rumania, the other large producing country in Europe, are limited with those coming from Iran, controlled by large international companies.

1940 Meeting

The meeting place of the 1940 World Petroleum Congress was not decided upon during the Congress here. I presented the official invitation of the International Petroleum Exposition to hold the Congress in Tulsa in May, 1940. I also explained the scope of the Exposition to members of the Institution of Petroleum Technologists at a dinner in London last week, given in honor of American delegates. Both here and in London there was strong support given to the plan to hold the next Congress in Tulsa.

An organization was perfected here which will have charge of the permanent handling of the World Congress through S. J. Astbury, secretary of The Institution of Petroleum Technologists. Louis Pineau, government representative in the operations of Compagnie Francaise des Petroles, largest of the French oil companies, is chairman of the committee. Other members include Charles Bihoreau, Paris; Lieut. Colonel S. J. M. Auld, Vacuum Oil Co., Ltd.; Thomas Dewhurst, The Burmah Oil Co., Ltd., London; Dr. Gustav Egloff, Universal Oil Products Co., Chicago; Dr. Stanislaw Pilat, Lemberg, Poland; S. Scheer, Standard Francaise des Petroles, Paris.

The papers presented at the sessions of the refining divisions were outstanding. Particular interest was manifested in prepared papers and discussions having to do with purification and sweetening of light oils, cracking and polymerization.

The American delegation and those from other countries were high in their praise of the several entertainment features provided by their Paris hosts. Rene A. Berg, who was a French delegate to the International Petroleum Exposition in Tulsa last year and who was in charge of several entertainment activities, was host at a banquet.

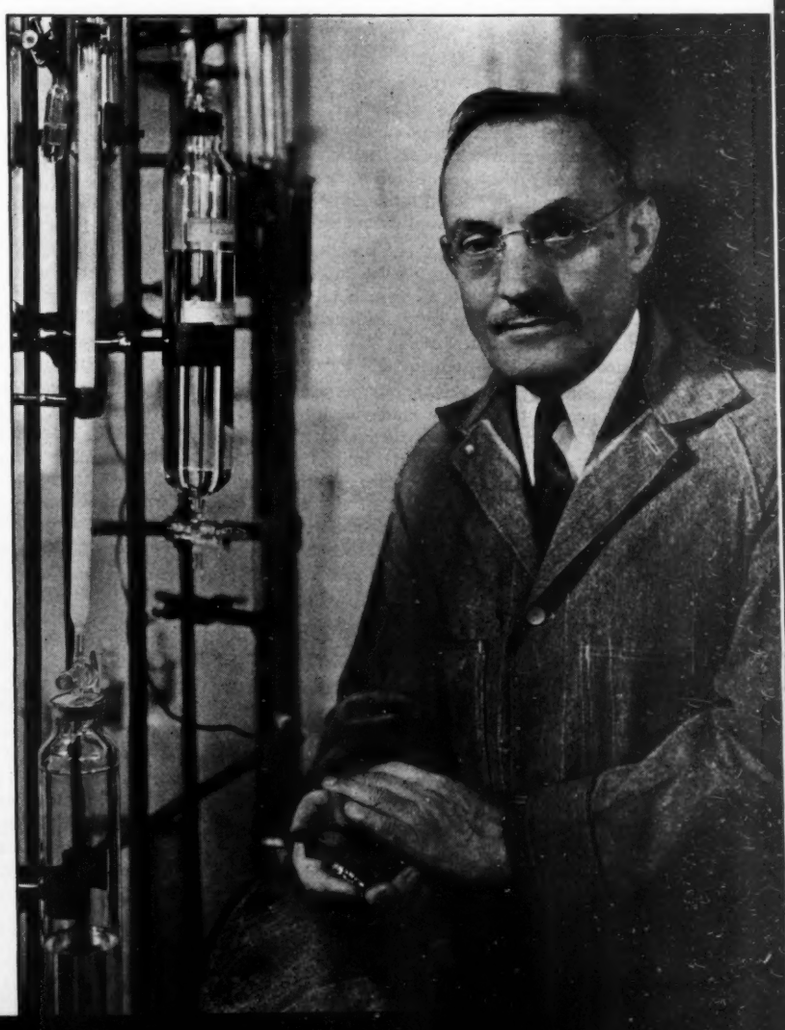
Future Demand

A feature of the meetings held by the production group was the paper presented by Professor E. V. O'Rourke of the University of Ohio in which he discussed the status of oil supply and demand with estimates of oil reserves. He reviewed estimates made of unusually heavy future demands.

To meet this demand he pointed out various developments in oil production practices that promise to guarantee a continuous supply of oil and in this summary he said: "From 80 to 90 per cent of the original oil content in fields which have been abandoned often remains in producing formations. This is based on scientific studies of depleted oil pools by analytical tests on diamond drill cores from the producing formations. Extractions which depended on rejuvenation methods applied to old fields further proved the contention. Mining operations in France and Germany disclosed the fact that about 14 per cent of the original oil had been extracted by pumping. The reasons for such a low percentage of recovery can be attributed to the methods used. Wells were allowed to produce as much as they could and this rapidly dissipated the natural gas pressure. Under these conditions, potential energy for expelling oil was wasted, but in modern producing systems this gas pressure is conserved. The fundamental expulsive agents in oil recovery are either natural gas or hydrostatic pressure or both. The retentive agents are adhesion, pore friction, and the viscosity of the oil. Unless there is sufficient free energy in the rocks to overcome the retentive factors, oil will not move to the drainage center at the bottom of the well."

"There are no prospecting methods as yet for finding oil when stratigraphic rather than structural conditions are the controlling factors in accumulation. The East Texas pool, which is the greatest oil deposit ever known, is of this type.

Dr. Gustav Egloff, director of research for Universal Oil Products Co., elected vice president of the World Petroleum Congress



"Drilling in the present fields to formations below known oil horizons often discloses new reserves. A great amount of potential petroleum-bearing land has been only partially tested. For example: In the state of Oklahoma, 620,000 acres have been found to yield oil out of 37,000,000 acres. 'Dry holes' have proved part of this large amount of land unproductive. Sedimentary rocks lie beneath vast areas in states other than the producing ones—these have not been tested for petroleum by the drill.

"There have been great strides forward in the art of refining petroleum which has made it possible to increase the amount of motor fuel extracted from crude oil. During the year 1914, 16 per cent of a barrel of crude oil was made into gasoline. Later the process, known as 'cracking,' was invented and applied to petroleum refining. This consists in the application of high heat and pressure to the oil, which causes a breaking down of the heavier parts of the crude oil into light volatile products. By 1926, 35 per cent of crude was transformed into motor fuel, and in 1935, 45 per cent treated was converted into that product. (These figures include straight distillation.) It is estimated by 1960, crude oil will yield 57 per cent of its volume to motor fuel. It has been figured that since 1920, 6,000,000,000 bbls. of additional crude oil would have been needed to supply the motor fuel demands if cracking had not come into use. Another more recent advance in refining is polymerization. This subjects gaseous hydrocarbons to carefully controlled conditions of temperature and pressure, and builds them into the form of liquid hydrocarbons. This process has been extensively introduced into the refining industry during the past two years and already indicates that substantial amounts of gasoline can be made from gases, a part of which was formerly wasted.

"Hydrogenation is another possible giant process which will come into action when needed.

"The processes of rejuvenation are known as water-flooding, air or gas repressuring, and vacuum. At least another 20 per cent of the original oil can be recovered from the old fields by their application. An actual accomplishment along this line is shown by a study of production records of the state of Pennsylvania.

"There is always the possibility of mining the oil formations to extract the amounts of oil left after ordinary processes of production are finished. Mining operations into oil sands have been carried on for years in France and Germany.

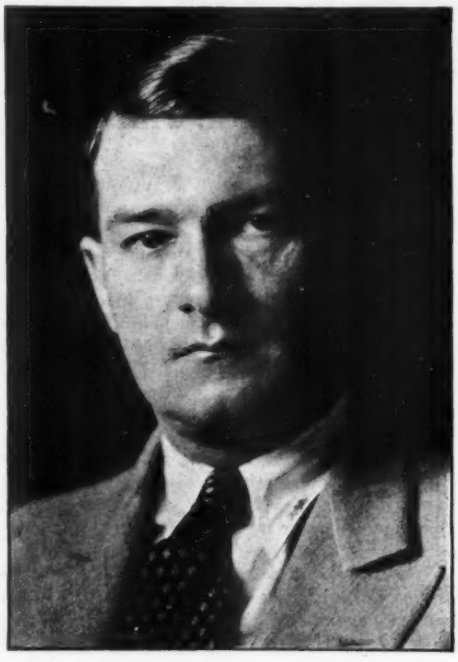
"Not only are there these possibilities in the United States for continuing the supply of oil for years and years, but the same principles can apply to other oil producing countries such as: Russia, Venezuela, Rumania, Persia, Dutch East Indies, Mexico, Colombia, Argentina and Peru."

Cooperating to make the congress the success it has proved to be were many technical and industrial societies scattered throughout the world and most active were the Institute of Petroleum Technologists, London; American Petroleum Institute; American Association of Petroleum Geologists; National Petroleum Association of Poland; Rumanian National Committee for Drilling; Association of Petroleum Industrialists; German Society of Mineral Oil Research and Austrian Petroleum Institute.

To enable those present to utilize the time available to best advantage the papers were presented by subject and for discussion under five distinct classifications. These included papers in Geology and Drilling Practices; Physics, Chemistry and Refining; Materials of Construction; Utilization of Petroleum Products; and Economics and Statistics. Under the chairmanship of Ch. Bihoreau and assisted by J. Filhol, secretary, the arrangement committee known as the Association Francaise des Techniciens du Petrol provided preprints of many papers presented by title before each of the five sessions and practically all of the time spent at the sessions was devoted to discussion.

Geology and Drilling

In the division of geology and drilling, papers were presented covering every phase of these two important branches of the oil industry. One presented by L. Joleaud, professor at the Sorbonne,



Prof. E. V. O'Rourke, University of Ohio, who asked the congress "Will There Be Enough Oil?"

covered work done on the Isle of Bahrein in the Persian Gulf in which he offered suggestions of oil showings in the geological formations of neighboring areas. He said recent oceaneous explorations have shown petroleum oozings in the Oman Gulf, off the Eastern Arabian shore.

A paper was presented in detail describing the geology of the Iranian fields in which it was pointed out that the exclusive control of the Anglo-Iranian Oil Co. over the Iranian fields has enabled it to rationalize production and to secure an efficient preservation of the oil.

Continuing to discuss production methods by countries, Sigismond Bielski, professor at the Ecole Superieure des Mines at Krakow, Poland, explained the procedure followed in mining oil in Poland. Much intensive field research work is being done through the Society of Polish Engineers and by the Geological Institute at Kosno where gas lift is being developed for field application on a large scale. Bottom-hole pressures are being taken throughout the fields of the country and these serve as the basis for the manner in which the newer production methods are applied.

As if to summarize the work and status of the Polish fields, O. W. Wyzyski, Geologue en Chef de la Societe Anonyme "Pionier," said:

"From the researches recently made in the Miocene Basin of the foreland of the Polish Karpaths we may envisage the possible discovery of new oil fields in this geological province."

Turning to a discussion of production methods as practiced in Pechelbronn, M. R. Decker, Ingenieur a la Societe de Pechelbronn, explained the use of an intermittent pumping device that automatically starts and stops.

In the division of refining one of the most interesting and timely statements made was that of Dr. Gustav Egloff, who presented the paper by title written by H. H. Hubner, Gustav Egloff and G. B. Murphy, all of Universal Oil Products Co. The statement was:

"Based on available data, it may be conservatively estimated that there are over 1,000,000,000 gallons of commercial iso-octane of 90-100 octane number potentially available in the United States from refinery and natural gases.

"Because of the combination of advantages inherent in iso-octane, namely, ability to 'stand-up' best under the widest variety of engine-operating conditions, high heat value, and good stability without the use of inhibitors, iso-octane is destined to remain one of the principal blending agents in the manufacture of high-octane fuels.

"It is predicted that within three years 100-octane fuel with less than 3.0 cc. of tetraethyl lead per U. S. gallon will be in general use by the military services. For commercial airline service, 100-octane fuel similar to the above will be used for take-off and 87-92 octane with little or no lead (less than 0.5 cc./gallon) for cruising."

Later, in discussing trends in diesel fuels, the same authors offered a survey of opinions and test data to indicate what is wanted in diesel oil characteristics to enable the refiner to manufacture most economically the type of fuel best suited to the present types of diesel engines. This culminates the work in which 58 diesel engine manufacturers participated and brings to date a survey made in 1935 which covered the oil requirements of the engines made by 38 manufacturers. The data in both instances covered the needs from the standpoint of combustion ignition and the solid injection types of engines and the oil qualities from the standpoint of ignition quality, viscosity, cleanliness, distillation characteristics, carbon forming characteristics, sulfur content, tendency to corrode metals, flashpoint, pourpoint, gravity, gum and cetane value. In concluding the paper the authors said:

"The conclusion given earlier to the effect that refiners should be able to meet without difficulty the ignition-quality requirements of the high-speed diesel engine through normal refining methods does not hold true in the case of fuels suitable for aircraft use. For the latter purpose, fuels of high ignition quality and low pourpoint, so-called premium fuels, are required."

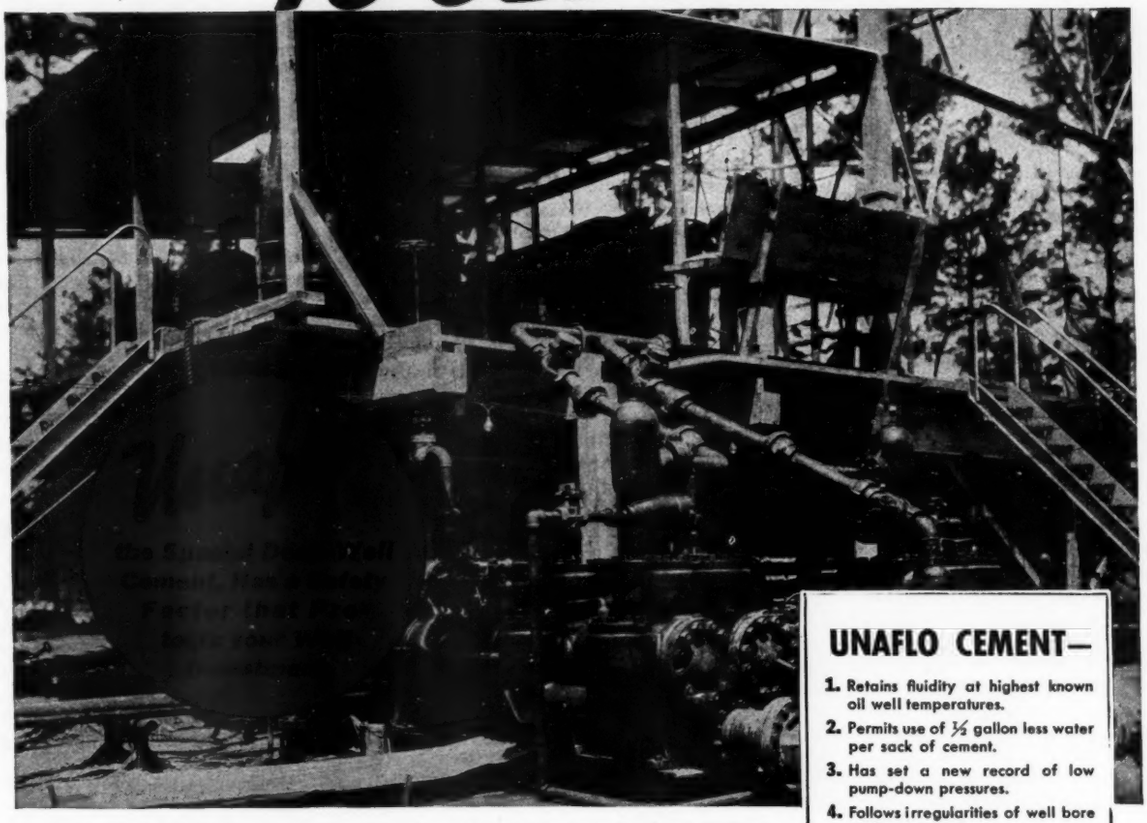
A conclu[illegible]urvey of crude oil characteristics was also presented by Dr. Egloff who shared the authorship of the paper with Edwin F. Nelson and Dr. J. C. Morrell, of Universal Oil Products Co. The survey was conducted to show the refinability of crude oils produced in fields scattered all over the world and placed particular emphasis upon the yields of such oils when subjected to cracking. Some insight into the importance of polymerization for the preparation of high-octane motor fuels was also offered.

Several reports were made regarding laboratory work involving fundamental data on hydrocarbons. One was submitted by A. P. van der Vet of the Amsterdam Laboratories of Royal Dutch Shell. It was developed from research conducted in the lighter hydrocarbons and one conclusion of unusual practical value is that which the author outlined by saying "when two known volumes of propane and butane are mixed, there will be a consistent difference of some tenths of per cent in volume."

Dr. Ir. J. Pfeiffer and Dr. R. N. Sall, of the same laboratories, presented data on the ductility of asphalts from which they concluded that the belief that the ductility of an asphalt serves as an index of the asphalt's binding capacity, is too general and incorrect.

The extraction of various hydrocarbon fractions through the use of solvents as practiced in stage separations was reviewed by Dr. A. Klinken-

GIVES YOU MORE TIME TO GET IT DOWN



● When the hole is deep and temperature's high—and trouble starts to pop—that's when you'll appreciate the *extra time* Unaflo gives you! Unaflo sets slower, yet hardens quickly after initial set—forms a tight shut-off against gas and water.

In Oklahoma there is a Johnson Sand well that produces about 1500 barrels of gross fluid per day on gas lift, cutting approximately 98%. It was decided to try to plug off water in this well by attempting to force quantities of thin cement slurry into permeable streaks in the sand, and then remove the cement from the hole.

Thirty-five sacks of Unaflo were pumped into the seven-inch casing between two rubber plugs. Pressures up to 2400 pounds were used. Here's a record of the time:

Mixed 35 sacks	**22 minutes**
Pumping cement in casing	**4 minutes**
Put in follow plug	**7 minutes**
Pumping plug to 6,245 ft.	**5 hrs. 5 min.**
Total Time	**5 hrs. and 38 min.**

Why not give this new and better oil well cement a trial on your next job? Universal Atlas Cement Co., United States Steel Corporation Subsidiary, Amicable Bldg., Waco, Texas. Kansas City, Tulsa, Oklahoma City.

UNAFLO CEMENT—

1. Retains fluidity at highest known oil well temperatures.
2. Permits use of ½ gallon less water per sack of cement.
3. Has set a new record of low pump-down pressures.
4. Follows irregularities of well bore and casing.
5. Attains full strength rapidly under high temperatures.
6. Remains fluid even when contaminated by mud.
7. Remains fluid while being placed, thus forming an impermeable seal against the movement of formation fluids.
8. Has proved in the field that it "sets up" in sulphate waters.
9. Has repeatedly remained fluid for more than two hours on squeeze jobs where pressures and temperatures were extreme.
10. Is a safer cement for oil string and repair jobs.

USS

UNAFLO

FOR SAFE DEEP-WELL CEMENTING

berg also of the Shell laboratories at Amsterdam. Augmenting this report Dr. A. Schaafsma of the same laboratories outlined three simple methods and comparative results when used to determine the concentration of the solvent in the extract and in the raffinate phases when a mineral oil is mixed with a polar solvent.

An equally practical and timely work was that reported by M. H. Roche, Ingenieur-Chimiste a Pechelbronn SAEM, in which he said:

"From the research of practical conditions for the use of copper salts in kerosene sweetening, it has been possible to develop a refining process which is simple and very economical; it consists in adding to the usual quantity of pure clay required for the discoloration of the kerosene a very small percentage of an actival clay which has been previously impregnated with well known quantities of copper sulfate and sodium chloride. Thus, in a single dry operation, sweet and light products can be obtained from very sour and off color raw stocks. This process is suitable for refining other distillates."

World-wide recognition of natural gasoline as a valuable constituent of motor fuel goes without questioning now but there was a time when that product did not enjoy this position. In outlining the status of the industry, D. E. Buchanan, president of Hanlon-Buchanan, Inc., said before the Division of Utilization:

"There are reported to be 850 natural gasoline plants in operation in the United States. Plant investment is estimated in excess of $250,000,000 but an intelligent breakdown of plant investment or operating cost per unit of production is impossible because of wide differences in operating conditions. We will cite typical cases to illustrate the extremes. Consider first a plant in the prolific East Texas field, drawing its supply of casinghead gas from over 2,200 oil wells and returning residue gas to the leases. This particular plant has a network of 81 miles of gas gathering system, consisting of pipe sizes from 20 inches in the main trunk lines down to 4 inches on the leases. The return residue gas system consists of 45 miles of pipe line from 8 inches down to 2 inches, a total of 126 miles of pipe line of varying sizes. Contrast this operation with a plant extracting gasoline from the main line of a gas transmission system. No gathering lines. No return residue lines and the line pressure is utilized in the absorption operation.

"Since there is presently little natural gasoline available to world markets outside of the United States from territories other than the Mid-Continent and Gulf Coast fields, we will confine our discussion of composition and quality characteristics to the natural gasolines now generally assembled from those fields for the cargo markets.

"The actual liquefiable content of natural and casinghead gas varies over a wide range of volume and hydrocarbon composition depending on the source of production, conditions of pressure under which the casinghead gas is separated from the crude oil, and to a minor extent on type and efficiency of plant extraction facilities.

"Table 1 gives the hydrocarbon composition of three distinct types of casinghead gas and one type of gas well gas which constitute the source of a very large percentage of the natural gasoline available to the Mid-Continent-Gulf Coast cargo market.

"A vast amount of research has been directed toward the conversion of the lighter waste hydrocarbons to various synthetic products, such as, alcohols, ketones, benzol, toluol, acids, aldehydes, and such condensation products as bakelite, etc. The reaction of these lighter hydrocarbons, at elevated temperatures and pressures, with and without the aid of catalysts is well known, but this field offers slight promise of commercializing any appreciable quantity of these hydrocarbons, potentially available, because of the competition of other

TABLE 1—TYPICAL GAS ANALYSIS

	East Texas (Casinghead gas)	North Texas (Casinghead gas)	North Louisiana (Combined gas well and casinghead gas*)	Panhandle (Typical gas well gas)
Methane, mol per cent	41.40	59.37	92 53	87 13
Ethane, mol per cent	15.80	16.16	3 85	5 85
Propane, mol per cent	24.20	14.78	1 57	4 25
Iso-Butane, mol per cent	2.80	1.92		.55
N-Butane, mol per cent	9.70	3 68	1.09	1 20
Iso-Pentane, mol per cent	2.00			.48
N-Pentane, mol per cent	2.00	4 09	.96	.26
Hexane plus, mol per cent	2.10			.28
	100.00	100.00	100.00	100 00
G.P.M. 26-pound†	3.28	2.52	.60	.39
G.P.M., 22-pound†	2.93	2.27	.56	.35
G.P.M., 18-pound†	2.63	2.05	.52	.31

*Typical of North Louisiana Production. †Natural gasoline (Reid V.P. at 100° F.).

source materials and the rather limited market, from a volume standpoint, for the finished products.

"The first commercial development, of any consequence, of markets for by-products from the manufacture of natural gasoline was the adaptation of the liquefied petroleum gases to domestic use.

"Polymerization, just now in the initial stages of commercial application, may however, prove of great benefit to the natural gasoline industry. The rather limited literature available at this time indicates that installations for the polymerization of the saturated hydrocarbons, butane and propane such as are produced as by-products in the manufacture of natural gasoline, may only be economically feasible where large volumes are available at a central location and such locations are rather few and far between. Present day yields do not seem to provide sufficient return on plant investment to cover rail transportation of the raw material to the processing plant and leave anything for the manufacturer of the raw material. It is anticipated, however, that with further perfection of the processes of polymerization, installations will be made in most of the large refineries wherein, particularly the unsaturates in the butane series which are now being incorporated in motor fuel as well as the propane series which are now being burned as fuel, will be polymerized, opening the way for the utilization of additional quantities of natural gasoline, and of higher than today's allowable butane content, in order to replace the volatility now being supplied by the refinery vapor recovery systems.

"All of these developments are of great interest to the natural gasoline industry, in fact to the entire petroleum industry and the consumer as well, because of the prospect of commercial utilization of these light hydrocarbons which are now surplus above motor fuel volatility requirements in their normal state and are, likewise, undesirable fractions in commercial natural gas. Although the practicability of utilizing butane-propane as motor fuel in especially equipped internal combustion engines has been satisfactorily demonstrated, it is probable that processes above mentioned will eventually consume sufficient of these waste hydrocarbons as will discourage the further multiplication of the already overbuilt retail motor fuel distribution and dispensing facilities which would have to be of special design to handle the products under high pressure and therefore quite expensive to install."

Materials of Construction

A special session was devoted to discussion of materials used for construction purposes in the oil industry. These papers included steels, cast iron and protective coatings for ferrous materials. Engineer M. G. Verhey, of Loosduinen, Pays-Bas, France, stated that formerly steel was protected principally by many coats of ordinary oil paint without much attention being paid to the pretreatment of the surface to be coated.

SYNTHESIS EXPANDING MARKETS DR. EGLOFF TELLS I. P. T., LONDON

LONDON, England, June 12—Synthesis is rapidly expanding the markets for petroleum with chemists now designing hydrocarbons for the specific uses to which they are put, according to Dr. Gustav Egloff who delivered three lectures this week under the auspices of The Institution of Petroleum Technologists. Dr. Egloff who heads the research department of the Universal Oil Products Co., spoke at branch meetings of the Institution held at London, Swansea and Manchester.

Members of the American delegation attending the World Petroleum Congress at Paris were guests of honor at the London meeting attended by 250 members and friends. Colonel S. J. M. Auld, president of The Institution of Petroleum Technologists presided. The American group included D. E. Buchanan, E. I. Hanlon, V. Ipatieff, T. N. St. Hill and H. F. Worley.

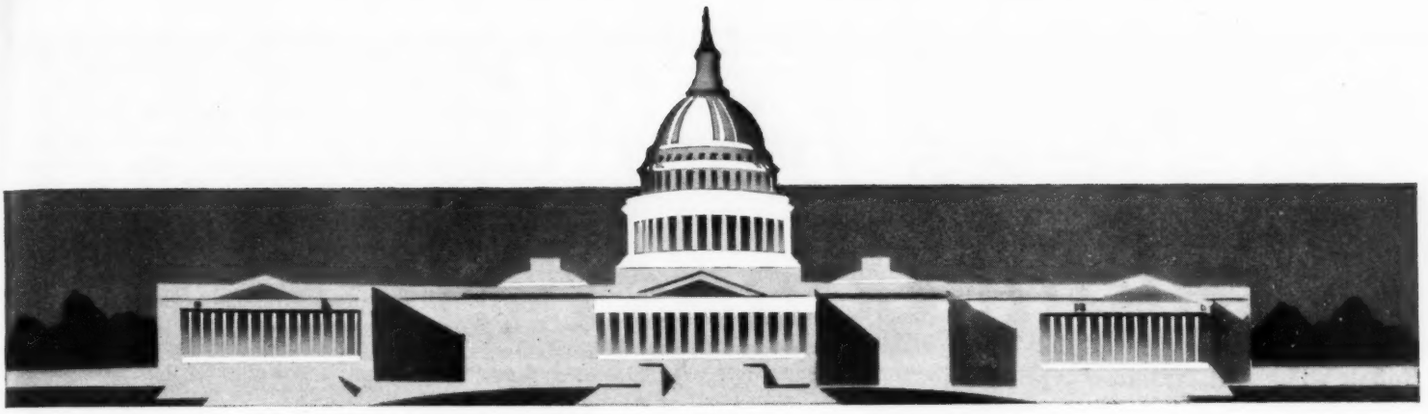
Cracking processes produce as a by-product, a gas containing ethylene, propylene and butylenes, a corner stone for numerous synthetic products, Dr. Egloff explained in his address on "Synthesis in the Oil Industry."

The ethylene and propylene are used not alone for ripening fruit, but are being converted into alcohols, glycols (for antifreeze solutions), chlorhydrins as stimulator for productive growth. The olefins are being converted into motor fuel (gasoline) at the rate of 10,000 barrels a day, by catalytic polymerization.

The propylene is being converted into isopropyl ether, by some refiners, Dr. Egloff said. Available information indicates a potential of 850,000,000 gallons a year of 100 octane motor fuel, with propylene as a blending agent. The butylenes in the total cracked gases of the United States can be changed by the chemist into 700,000,000 gallons of 95 to 100 octane motor fuel. If used as a blending agent with isopentane, and 75 octane gasoline, plus 3 ml. of lead over 2 billion gallons 100 octane fuel may be produced each year.

Butylene which is converted into high octane fuel is also being formed into high oxidation resisting lubricating oils, which when added to low viscosity index oil improves its wearing quality. By extending the reaction of polymerization through the oil stage a highly viscous liquid is produced, now utilized for plastics which are highly resistant to both acids and alkalies.

The transformation, Dr. Egloff explained, can also be continued to the production of a rubber substitute, which decreases the oxidation of rubber, thus extending period of use. A large sample of the rubber substitute was shown.



New Dissension at Washington as Series of Crises Grows

By HENRY D. RALPH

WASHINGTON, June 21—Dissension in the ranks of the New Deal is becoming more evident as the administration moves toward a series of crises on labor relations, taxation, relief, supreme court reorganization, regulation of industry, and miscellaneous legislative proposals.

Critics are making much of Vice President Garner's departure from Washington just as congress buckles down for an arduous summer session, and the Democratic picnic next week-end at which President Roosevelt will discuss party harmony with members of congress on an island in Chesapeake Bay. But whether these symptoms are significant or not, observers are agreed all is not well in the New Deal councils and there is much dissatisfaction with the president's policies. Old line Democrats are much disturbed over the strike situation; some of the president's most trusted lieutenants have parted with him on his relief appropriation bill; the supreme court reorganization plan is admittedly dead; there is little enthusiasm for many other bills which the president has repeatedly said he very much desires; and the tax evasion expose has so far been pretty much of a dud.

Strike Situation

Repercussions from the steel strike became so loud the president made a move to quiet them by permitting Secretary of Labor Perkins to appoint a three-man commission of conciliation to attempt a settlement, but it may develop this commission is little more than window dressing. It was not appointed until several committees of congress appeared to be on the verge of investigating the strike themselves, and the senate post office committee had actually begun an investigation of interference with the mails by steel strikers.

In addition, the National Labor Relations Board has pending some cases which may result in an official interpretation of the question of signed agreements and the question will not definitely be decided until the board issues an order and it is reviewed by the supreme court. The strike is emphasizing the one-sided nature of the law which imposes many obligations on employers and none on employes. An undercover movement is growing in congress to amend the law to require unions to be legally responsible for employment contracts, although the administration is quietly attempting to forestall any such action. This feeling has reached such a point that labor leaders are worried and have begun to make gestures toward discipline to prevent unauthorized strikes. At the same time, John L. Lewis has threatened to order union coal miners not to load coal for shipment to steel plants which have declined to sign C. I. O. contracts, which appears to be in direct violation of the contract between the coal union and Pennsylvania operators.

With public sentiment becoming more and more aroused over the interruption to business caused by labor disputes, and with a large portion of the president's party members in congress opposed to the free hand given C. I. O. unions, it is evident the administration is facing a crisis of major importance.

Tax Legislation

Nothing particularly sensational has yet been developed by the congressional investigation of loopholes in the revenue law and there is no indication what legislation, if any, will result during this session. At the first session Secretary Morgenthau again criticized the long standing allowances given oil producers for depletion, but he did nothing more than repeat his recommendation of 1933.

Change in the oil depletion provisions is a complicated and controversial matter which is by no means new and properly belongs in the wholesale revision of the entire revenue structure scheduled for next year instead of an emergency loophole plugging bill such as expected this summer. In the same category are most of the treasury's other proposals, and so is the matter of modifying the corporate surplus tax to provide relief for small businesses which are prevented from building up adequate working capital out of earnings. Representative Emanual Celler of New York has introduced a bill to modify the corporate surplus tax by permitting exemptions for the discharge of indebtedness and expenditures for improvements as well as a general credit of not to exceed 30 per cent of the net income of a corporation, and while this bill is widely endorsed by business interests the administration will undoubtedly oppose its consideration at this time.

Hope for elimination of the federal gasoline tax and other nuisance excise taxes in the comparatively near future Is contained in the action of the senate finance committee in voting to extend all such taxes for only one year beyond their present expiration date of June 30. The house has already voted an extension for two years, but if the senate insists on a one-year extension the administration may be forced to accept this to prevent the taxes from expiring. If this is done it will mean revamping the revenue laws will have to be the first order of business at the session in January to have a new law effective by the time the excise taxes expire next June. Of course, there is no assurance the gasoline and other excises will be dropped, but if the administration carries through its announced intention of making a scientific study of taxes and the overlapping of state and federal taxation it will provide the best possible opportunity for the oil industry to state its case against federal gasoline taxes.

Crude Storage Survey

Representative John J. Dempsey of New Mexico has introduced a bill to authorize an annual appropriation of $24,000 to enable the Bureau of Mines to make periodic reports on the quantity and character of crude petroleum in storage in the United States. If enacted, this bill would permit a constant check on petroleum storage and the publication of the information for use of the public and of the Interstate Oil Compact Commission and state and federal agencies.

Lea Natural Gas Bill

The Lea bill to establish federal regulation of natural gas pipe lines in interstate commerce has been given the right of way by administration leaders in the house. The rules committee has voted a special rule to permit the bill to be taken up at any time with debate limited to two hours, which indicates that little or no opposition is anticipated. The bill may be called up almost any day when the house leaders can fit it into the legislative calendar.

Oil News from Foreign Lands

Mexican Labor Conditions "Quiet"

Labor conditions in Mexico were reported "quiet" last week while government agents started their inspection of private companies' books to determine their ability to pay higher wages and grant other concessions to workers involving heavy expenditures.

The government's inspectors were appointed and assigned to the task of examining books of private oil companies operating in Mexico as the current step in settling a dispute with labor which precipitated a 13-day strike. On application of the labor syndicate, the government assumed the role of arbitrator and agreed to carry on the investigation to determine ability of the companies to pay the higher wages requested and to supply houses, grant vacations and pensions asked by the workers. Results of the examination of books presumably will constitute the basis for final settlement of the dispute between companies and labor.

Reports came from Mexico last week that the Bureau of National Economy would soon entertain applications for new drilling permits from private companies. Concerns operating in the country, however, said they had not been formally advised of this reported demarcation from policies of the government for the past year or two.

It has been the recent practice in Mexico to grant permits to the old Petromex company which in turn frequently sought to "farm out" the holdings to private concerns. Usually the carried interest demanded by Petromex made the possibilities unattractive.

Rumanian Oil Industry Hit

Currency regulations recently imposed by the National Bank of Rumania covering petroleum export dealings have placed additional hardships on the oil industry of that country. In addition to the fact that Rumanian companies are no longer permitted to retain a portion of the proceeds from export sales in foreign exchange for subsequent purchase of supplies and for payment of salaries, the National Bank is now exacting a fee for collecting against bills of lading. Until about two months ago, all companies had arrangements with the National Bank by which the exporters undertook to deliver to the bank the resulting foreign currency in about six to eight weeks after date of shipment, the company being allowed to retain 10 per cent of the value of the exports for its payment abroad, such as for materials, salaries and other expenses. Documents were required to justify such expenditures.

Currently, however, the National Bank's regulations require that all shipping documents be endorsed and turned over to one of the several commissioned banks who, through agents abroad, collect for the petroleum exports on presentation of the duebill. The foreign currency thus collected against petroleum exports is turned over to the National Bank which subsequently issues the equivalent in lei to the exporting company. Fees for handling collections and exchange are deducted by the banks involved.

Furthermore, the price involved in each export cargo is subject to scrutiny by a price commission which imposes various sorts of penalties or hardships against the concern shipping abroad for less than the Rumanian posted price. A fine is imposed equal to several times the difference between the price involved in the export sale and the current Rumanian price and it is necessary for the exporter to resort to court proceedings and establish that the lower export market is the true price involved to obtain reimbursement for the fine. This procedure almost excluded the normal exercise of petroleum export business. Much of the export business in petroleum products is arranged on contracts covering a period of several months to a year. Local factors may cause wide fluctuations in the Rumanian market from day to day, week to week or month to month, but each cargo shipment is subject to comparison with the price actually ruling within the country at the time the lot is lifted.

Currency regulations and restrictions imposed on actual shipments of petroleum are only two of the barriers which appear to be gradually forcing Rumania into a less important position as a supplier of world oil requirements.

Drilling in England

Anglo-American Oil Co., English operating subsidiary of Standard Oil Co. of New Jersey, has spudded its first test for oil production on the British Islands.

The American company's first exploratory venture in England is near Grove Hill near Hellingly, Sussex. The test was spudded with appropriate ceremonies featuring Lord Apsley, representing the minister for coordination of defense.

A 17-inch hole was spudded. Modern American rotary drilling equipment has been assembled at the Grove Hill location.

Anglo-American Oil Co. has been active in acquisition of prospecting license areas on the British Islands along with D'Arcy Exploration Co., a division of the Anglo-Iranian Oil Co., Steel Brothers and Gulf Oil Corp. Anglo-Iranian's subsidiary has recently abandoned two failures, but is launching two more drilling operations.

Soviet Exports

Export petroleum traffic through the Black Sea, which consists of approximately 90 per cent of Soviet Russia's export business, amounted to about 1,107,099 bbls. in April, according to a report from Julian E. Gillespie, American commercial attache at Instanbul, Turkey to the U. S. Department of Commerce. About 70 per cent of the total Black Sea petroleum traffic of 158,157 tons in May consisted of fuel oil. Italy and Germany were the destinations of 68,982 tons out of the total fuel oil exports of 84,717 tons. Gasoline exports through the Black Sea, moving mostly to England, totaled 38,610 tons; kerosene 23,494 tons and lube oil 11,336 tons. Indo-China was the destination of nearly 50 per cent of the kerosene while the lubricating oil went largely to Germany.

The volume and destination of the petroleum products exported during April were as follows:

Destination:—	Fuel Oil	Lube Oil	Kerosene	Gasoline	Total
Belgium	3,870	.....	.....	.....	3,870
France	1,280	1,198	.....	2,100	4,578
Germany	29,266	9,941	.....	.....	39,207
Egypt	.....	.....	5,726	.....	5,726
England	.....	.....	5,003	25,267	30,270
Indo-China	.....	.....	10,465	.....	10,465
Italy	39,716	.....	.....	1,962	41,678
Spain	7,575	.....	.....	1,250	8,825
Sweden	2,135	.....	2,300	6,000	10,435
Turkey	875	197	.....	2,031	3,103
Total	84,717	11,336	23,494	38,610	158,157

Argentine Imports

Despite the efforts of Argentina to establish self-sufficiency in petroleum, the country's imports of gasoline increased substantially during the first quarter of this year. Smaller increases were reported in a current review by A. Cyril Crilley, American trade commissioner at Buenos Aires, for lubricating grease and diesel oils, compared with the corresponding period in 1936.

Gasoline imports in bulk and in drums increased from 446,579 liters in the first three months of 1936 to 22,077,049 liters in the first quarter this year. Gasoline imported in cases decreased from 43,000 cases in the first three months of 1936 to between 23,000 and 24,000 cases for the first quarter of 1937.

Imports of lubricating grease increased to a total of 54,130 kilos and diesel oil increased to a total of 61,827 metric tons. Imports of crude oil, however, decreased from 111,000,000 kilos in the first three months of 1936 to 85,000,000 kilos in the first quarter of 1937.

Exports of petroleum and products during the quarter period of this year showed general decreases. Kerosene exports dropped from 138,000 liters to 30,000 liters and gasoline shipments from 358,000 liters to 119,000 liters. A kilo is equal to 2.204 pounds; a liter equals 1.0567 quarts, and cases of gasoline equal 10 American gallons.

Lago Petroleum Corp. village on stilts at Lagunillas, Venezuela. Practically all of the houses are built over the water

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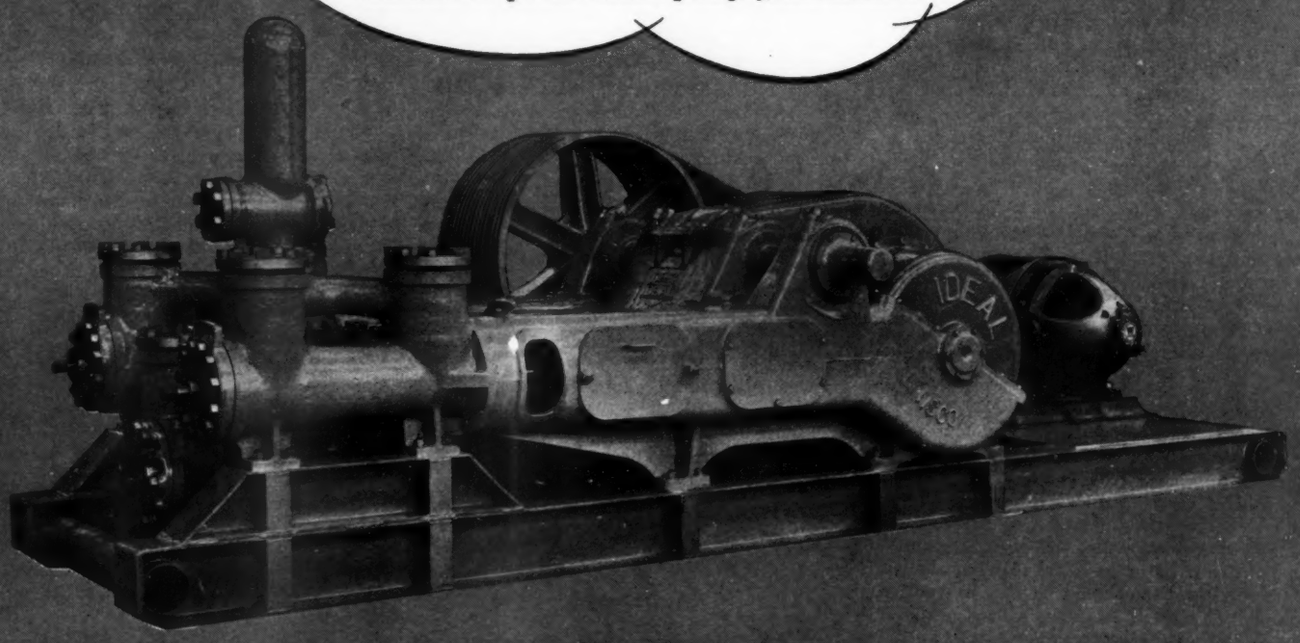
THE FIRST POWER PUMP capable of the sustained high pressure circulation that has enabled modern steam pumps to drill so rapidly. A demand for smaller Ideal Power Pumps of the same type almost immediately followed and Types C-150 and C-250 were built. These Pumps with their high working pressures and full capacity power ends have set an advanced standard of power slush pump performance.



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National

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Refinery Expansion

New Fuel Oil Refinery

NEW YORK, June 22—A new refinery, to be operated primarily for the production of fuel oil is being constructed by Frontier Fuel Oil Corp., on River Road, near Buffalo where the company has developed an extensive market among steel plants and factories. The new refinery, to be constructed under the direction of Frontier Engineering Corp., a subsidiary and Mid-Continent Engineering Corp., of Dallas, Texas, is designed to process 2,500 bbls. of crude daily.

Crude is to be obtained from Michigan and delivered to the Buffalo refinery by barges through the New York State canal. Supplementary crude supplies will be brought from the Texas or Louisiana Gulf Coasts by tanker.

James F. Breuil, president of Frontier Fuel Oil Corp., said the company has been supplying 80,000,000 to 100,000,000 gallons of fuel oil per year to customers in the Buffalo area. Three steel mills which depend almost entirely on fuel oil for their blast furnaces are the chief consumers.

Republic Takes License

A license from Gasoline Products Company, Inc., covering cracking operations, has been taken by the Republic Oil Refining Co. Republic owns and operates a refinery at Texas City, Tex., where for a number of years it has operated a cracking unit built by the Winkler-Koch Engineering Co. It is understood that the consummation of the new license agreement involves the dismissal of a suit by The Texas Co. for infringement of the Behimer clean circulation patents. This suit has been pending for some time. With the wider scope of processing methods available to Republic under the new license a study of improvements possible in the cracking operations will be undertaken in the immediate future.

Sued on Inhibitor Patent

On June 18, 1937, Gasoline Antioxidant Co. brought suit in the U. S. District Court sitting in Chicago, charging Universal Oil Products Co. and Shell Petroleum Corp. with infringement of U. S. Patent 2,053,511 which issued to it on September 8, 1936, upon the assignment of Harry T. Bennett and LeRoy G. Story. The patent relates to the addition to motor fuel of a chemical substance which will inhibit or retard the formation of gum and thus act to prevent the deterioration, loss of antiknock, etc., which otherwise occurs in certain types of cracked gasoline during storage. Claim 7 of the patent, which it is stated illustrates the scope of the controversy, reads as follows:

"A motor fuel comprising cracked gasoline which normally tends to deteriorate and develop gums on storage, to which has been added a para-aminophenol in which an amino hydrogen has been substituted by an alkyl radical in quantity sufficient to retard said deterioration and gum formation."

The patent also contains claims covering the motor fuel thus produced.

The bill of complaint charges Universal with contributing to the infringement of the patent by purchasing and reselling chemicals which are alleged to come within the scope of the claims, and Shell Petroleum Corp. is joined as a direct infringer upon the allegation that it purchases and uses the materials and makes the patented product.

Messrs. Harry T. Bennett and LeRoy G. Story made their invention in 1926 while in the employ of Mid-Continent Petroleum Corp. and the patent application was filed for them on January 16, 1928, by Mid-Continent. Mid-Continent acquired a license, and with its consent title to the application was subsequently sold to Standard Oil Co. (Indiana) which transferred it to Gasoline Antioxidant Co.

The stockholders of Gasoline Antioxidant Co., commonly known as "G.A.C.," include the Pure Oil Co., Standard Oil Co. (Indiana), and the National Benzole Association of London, England. G.A.C. has licensed a number of refiners to use the processes and sell the products of Bennett and Story patent 2,053,511; and in addition, for some years the DuPont Co. has been offering benzyl para-aminophenol—commonly known as "B.A.P." —under license from G.A.C.

Shell Enters Newfoundland

ST. JOHN'S, Newfoundland—Colas Roads, Ltd., associated with Shell Oil Co., is constructing a plant near Clarenville, Newfoundland to cost $100,000 for converting asphalt into a road binding compound. The plant will have a capacity of 2,000 gallons an hour.

P. D. C. Officers

The annual stockholders' meeting of Petroleum Distillation Corp. elected eight directors at its recent meeting including E. J. Henry and T. G. Delbridge representing The Atlantic Refining Co.; W. E. Currie and R. H. Dickson representing Standard Oil Development Co.; B. K. Brown and W. B. Plummer representing Standard Oil Co. (Indiana), and R. J. Dearborn and W. M. Stratford representing The Texas Co.

The directors then elected as officers: President, T. G. Delbridge; vice presidents, R. H. Dickson and W. M. Stratford; secretary, M. H. Eames; treasurer, R. P. Resor.

In connection with the litigation on patents under which the Petroleum Distillation Corp. has licensing rights, hearings on appeals were held on May 3, 1937 before the Third Circuit Court of Appeals at Philadelphia. It is hoped that decisions will be handed down this fall. These appeals were taken after decisions adverse to P.D.C. had been handed down by Judge Gibson at Pittsburgh in the suits Atlantic vs. James B. Berry Sons' Co. Inc., and Standard Oil Development Co. vs. James B. Berry Sons' Co., Inc.

Fire and Safety Marshals

New officers of the Fire and Safety Marshals, National Petroleum Association, elected at the annual meeting in Bradford, Pa., last week: D. J. Harvey, Pennzoil Co., Oil City, Pa., president; H. S. Elkins, attorney, National Petroleum Association, Washington, D. C.; S. M. Wolbert, Kendall Refining Co., Bradford, Pa., retiring president; Charles H. Lindberg, Hyvis Oils, Inc., Warren, Pa., vice president; Charles M. Noyes, Valvoline Oil Co., Butler, Pa., secretary, and R. T. Henderson, Standard Oil Co. of Ohio, Cleveland, O., treasurer.

Western Minnesota Reports the Discovery of Oil

GREAT FALLS, Mont., June 21.—It is reported that a wildcat drilled by Rupert Lent, formerly of Greybull, Wyoming, near Wheaton, Traverse County, western Minnesota, has oil standing within 100 feet of the top of the hole which was drilled to a total depth of 864 feet. This well was scouted by Grenville Howard, geologist, who reports the oil is 37 gravity and a distillation test indicates 35 per cent gasoline, 45 per cent light distillate and 20 per cent wax distillates and residuum.

Samples of cuttings taken from dump box consist of a medium coarse sand with rounded pebbles of granite, mica and quartz about one half-inch diameter. As nearly as can be determined this oil is coming from Dakota sandstone although granite outcrops at a point about 20 miles to the east of the well.

While this well as it now stands is small it is significant because it may indicate the possibility of the Dakota formation extending westward across North and South Dakota as Wheaton is almost directly east of the state line between these two states. Some time ago a showing of gas was reported from the same area but the well did not prove to be of commercial importance.

Wildcats Show Promise

Wildcats in four Oklahoma counties gave promise of opening new pools the first of this week. Carter Oil Co. and others No. 1 Harley, section 24-2s-4w, Stephens County, had showings of oil all through broken sand in the Simpson zone at 6,304-6,332 feet, and was coring ahead. Helmerich & Payne's wildcat in section 12-1n-5w, Stephens County, was estimated good for 300 to 1,000 bbls. of oil daily after perforating casing at 3,785-3,800 feet.

Other wildcats showing oil were Carter Oil Co. and others No. 1 Thompson, section 34-2n-9, Coal County; Carter Oil Co. and others No. 1 Hamilton, section 34-4-9, Hughes County, and Stanolind-Amerada No. 1 Billington, section 32-9-3e, Pottawatomie County.

THE MARKETS*

CRUDE OIL: *Continued high rate of production with crude continuing to go to storage is not conducive to strong market. However, sellers having limited quantities of spot crude to sell are asking posted prices plus full transportation charges. Reports indicate strong demand at coastal points.*

REFINERY: *Gasoline tankcar prices generally firm although recent reduction in tank-wagon schedules of Middle West has brought fear of lower prices in Mid-Continent. All fuels strong in Gulf Coast and Atlantic Seaboard areas. Wax prices firm.*

TANK-WAGON AND SERVICE STATION: *No important changes in gasoline tank-wagon schedules following general reduction of previous week in Standard of Indiana territory. Scattered price cutting reported in service station schedules on third and regular grades.*

FINANCIAL: *Second quarter earning statements expected to be bullish factor in common oil stocks over next month. Average of 30 representative stocks for week ending June 19: High, 39.71; low, 37.79; close, 39.31. Week ending June 12: High, 41.19; low, 39.38; close, 39.54.*

**Detailed information in market section.*

Pipe Line Activity

Ness City Progress

The Kansas Pipe Line Co. of Alexander is making about three miles a day with its line to Ness City which will connect with the distribution system to be laid by the Western Light and Telephone Co. McCracken and Alexander systems are already under construction and will be connected as soon as the line is through Alexander. Bazine will likewise be connected. Western Light and Telephone hopes to keep to their schedule of having gas in Ness City about July 15.

New McClanahan Line

SAGINAW, Mich.—Organization of the McClanahan-Leonard Pipe Line Co., capital $500,000, to provide a new outlet for the Buckeye Township field in Gladwin County and larger supplies of crude for the McClanahan refinery at St. Louis and the Leonard refinery at Alma, is announced.

The new company has taken over all except a small portion of the McClanahan pipe line and is reported to have worked out an agreement with Pure Transportation Co. for rental of space in its Buckeye-Purtell line. From the Purtell station in Greendale Township, Midland County, the company will construct a 6-inch line to the Jasper Township field, in Midland county, where two 4-inch lines formerly owned by McClanahan interests, will pick up the crude and carry it to the St. Louis and Alma refineries.

The new line, on which construction has started, will increase the take from the Buckeye field by about 16,000 bbls. daily, bringing to approximately 34,000 bbls. daily the pipe line facilities for that field. This represents about half of the estimated current potential production, now held by proration to about 16,000 bbls. a day.

Walter L. McClanahan is chairman of the board of the new company, with J. W. Leonard, Jr., president. David E. Beach, who recently resigned superintendency of Pure Transportation Co., becomes vice president, secretary and general manager. Ted R. Russell, formerly with Pure Transportation, will be superintendent.

Natural Gasoline

Ballard Builds Plant

Aldon Gasoline Co. announces the building of a natural gasoline plant at Haven, Kans. This plant is to be located in the Stone sector of the Burrton pool. The location of the plant is section 20-24s-4w on the Tucker farm. The Aldon Gasoline Co., with headquarters at Tulsa, has the following officials: A. M. (Al) Ballard, as president, and R. J. (Don) Wallace, as vice president.

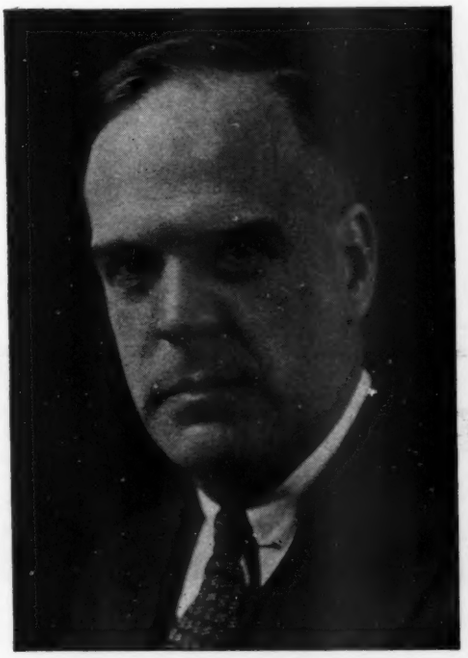
Contract has been given to the Petroleum Engineering, Inc., for the design and construction of the plant. The type of plant will be the latest vapor rectification type. It will be operated at high pressure and will be able to produce all grades of natural gasoline, butane and propane. The plant will have a capacity of five to ten million cubic feet per day. Plans have been completed and actual construction of the plant will be under way within the next few days. A large portion of the gas for this plant will be furnished from the oil properties of A. M. Ballard and R. J. Wallace in connection with casinghead gas secured from adjoining leases in this area. The plant should be operating within ninety days.

The cost of the plant will be approximately $200,000. Residue gas will be sold.

New President for Standard of Nebraska

A. H. Richardson, president and general manager of Standard Oil Co. of Nebraska, has resigned, effective July 1, but remains a director. He has been in the employ of Standard Oil Co. for over 40 years and with Standard of Nebraska since its incorporation in 1906 and its president for 20 years. H. W. Pierpont, who has been elected president and general manager, has been with the company 20 years and vice president 8 years. He joined the company in 1917 as purchasing agent. He was born in New Haven, Conn., and is 56 years of age.

C. N. Humphrey, elected vice president to succeed Mr. Pierpont, has been with the company 26 years and assistant general manager 20 years.



H. W. PIERPONT

A. H. RICHARDSON

Natural Gas

New Natural Gas Process

AUSTIN, Tex.—After seven years of laboratory research Dr. E. P. Schoch, director of the Bureau of Industrial Chemistry, University of Texas, announces discovery of a method of processing natural gas into by-products. The process may be applied at the well or elsewhere.

The discovery, as explained by Doctor Schoch, is how to control electric discharges or electric arcs through natural gas, making possible production of a definitely desired product, including carbon black, acetylene and others of commercial importance.

Doctor Schoch has a patent pending on the new method and when it is granted will turn it over as a gift to the state of Texas. He said that by the use of electrical discharges in processing of natural gas into a variety of products, the volume of gas, valued at $200,000,000 annually, going to waste in Texas, would be saved and converted into wealth many times that amount. Doctor Schoch pictured the possibility of processing plants being established at individual wells in the Panhandle and other parts of the state.

The students who have obtained their doctor's degrees by their research on this problem are Dr. Judson Swearingen of San Antonio, Dr. Frank V. Patton of San Antonio, now with the railroad commission; Dr. Joe Louis Franklin, Dr. W. B. Franklin and Dr. A. A. Draeger, all of the Humble Oil & Refining Co.; Dr. Claude R. Hocutt of Lyford, Dr. Charles F. Jones of Elkhart, Dr. Gray T. Hamblen of Austin, and Dr. Joe C. Krejci of Phillips Petroleum Co.

OBITUARIES

JOHN CARTER, scout for Tide Water Associated Oil Co., with headquarters at San Antonio, Tex., died in a Houston hospital where he had been confined for several weeks.

CHARLES M. McLEAN, 60, president of Canfield Oil Co. since February 4, died at St. Luke's hospital, Cleveland, Ohio. He had been connected with the company since 1895 and before becoming president had been vice president in charge of sales.

DR. P. S. GRIFFITH, oil operator, died in Houston June 18. A native of Tennessee, he started in Spindletop in 1902, and operated in the Sour Lake and Batson fields and in Matagorda County. He and R. E. Burt organized the Atlantic & Gulf Petroleum Co.

FRANK B. HALL, 32, oil refiner, died June 8 at the Fred Roberts hospital in Corpus Christi, Tex. In a motoring accident June 1 Mr. Hall received a small gash on the head and Mrs. Hall a broken collar bone, infection causing Mr. Hall's death.

DOUBLE PLAY

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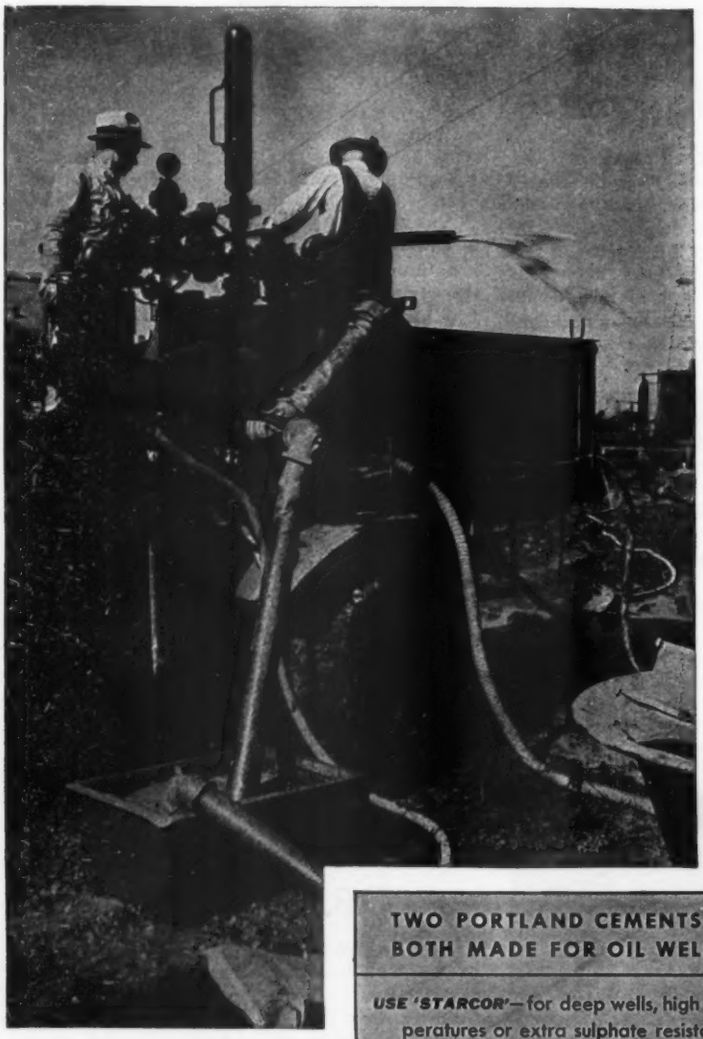

DOWN in the Clarkwood Field, near Corpus Christi, they pumped 400 sacks of 'Incor' into a 4800-ft. hole in 23 minutes. Over 200 ft. a minute! That says low viscosity to the chemist—but it means easier pumpability to you. And when they drilled out, there wasn't a sign of contamination—because 'Incor's higher gel strength keeps out the mud. Lower viscosity—higher gel strength—double play, sure enough.

'Incor', like 'Starcor', is specially processed to flow freely in heavier mixes. Both have that proved inbuilt safety factor against quick set which has saved many a job. Use 'Incor'* for wells of moderate depth—'Starcor'* for deep wells, high temperatures and for extra sulphate-water protection. Your nearby dealer stocks them both for immediate service. *Reg. U. S. Pat. Off.

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USE 'STARCOR'—for deep wells, high temperatures or extra sulphate resistance.

USE 'INCOR'—for wells of moderate depth.

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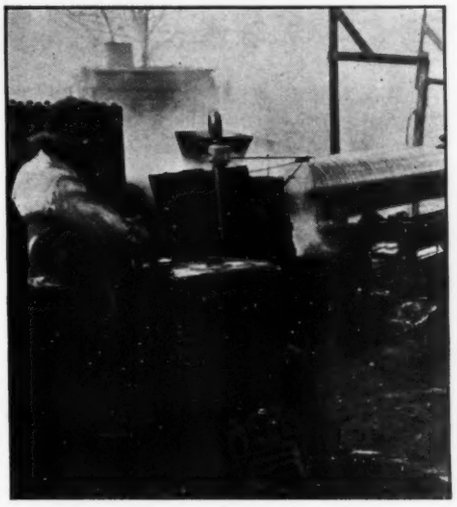
MAKERS OF LONE STAR CEMENT · 'INCOR' · AND THE CEMENT FOR STARCOR CONCRETE

Twenty-Inch Line Is Coated in the Field

By W. H. T. THORNHILL
Wailes Dove-Hermiston Corp.



Pipe passing through coating machine applying Bitumastic 70-B enamel

Recently 20 miles of 20-inch O.D. 59.231-pound-per-foot Youngstown steel pipe in double random lengths averaging about 47 feet each were coated for the Northern Natural Gas Co. in the vicinity of Palmer, Kans., by a new machine and new method of procedure in coating pipe lines. It is now well established that proper pipe protection requires not only the best material for the type of protection required but also proper application. One is as essential as the other. The two go hand in hand. Applying coating material to dirty or wet pipe is, to say the least, exceedingly poor practice and not likely to result in satisfactory performance.

The necessary requirements for the proper application of hot pipe coating materials are very few, in principle. The pipe must be clean and dry and completely covered to the required thickness on all surfaces with coating that has been handled in accordance with the manufacturer's instructions. That is basically all that is required.

Truck load of pipe coated in yard with Bitumastic 70-B enamel (no wrapper) ready for unloading in field

These requirements are certainly simple enough. However, it has been difficult in practice in the past to follow all of them when coating pipe along the right of way under the trying conditions existing in the field because of changing weather conditions and other hazards necessarily involved with the constant shifting of the "site" of the work to follow the contour of the ground. The method of applying the coating on this job should be of considerable interest to pipe line engineers because of the procedure adopted to overcome the past difficulties.

The pipe on this job was coated with Bitumastic 70-B Enamel followed by an unbonded Johns-Manville 15-pound coal tar saturated pipe line felt. The line was made up of a combination of welded field joints and pipe line couplings. About half of the joints were connected by each of these two methods.

Bitumastic 70-B Enamel was used instead of the ordinary coal tar enamel. While it is a coal tar enamel it has extraordinary properties of resisting wide temperature ranges. It will withstand high temperatures without sagging and low temperatures without cracking. These properties are particularly desirable to meet the exposure conditions surrounding the construction of any pipe line and the expansion and contraction conditions experienced underground in service. It also has better adhesion and will withstand considerably more abuse in handling than the ordinary coal tar enamel.

The coating job was revolutionary in several respects, as follows:

1. The coating of the *entire* pipe line was done on the job by the manufacturer of the pipe coating.
2. The main body of the pipe was coated by a new and novel endfeed pipe coating machine designed and built to handle pipe up to and including 30 inches in diameter. This work was done in a storage yard having a railroad siding secured temporarily for the purpose at Palmer, Kans., which was about midway between the ends of the new pipe line. The new coating machine was installed in the yard together with the necessary kettles, skids, water connections and other accessory equipment. The pipe, which was cleaned and shop coated at the mill, was again cleaned, as required, after delivery in the storage yard, reprimed and then sent through the coating machine.
3. Another feature, new to gas or oil pipe line practice, was that the pipe was coated with the hot enamel only, in the storage yard. No trouble was experienced from damage to the coating in the handling, transportation or unloading in the field. The wrapping was later applied in the field.
4. A further departure from the usual practice was that the coating of the joints in the field was also done by the pipe coating manufacturer who maintained a separate and distinct organization for this purpose.
5. The work was carried out fast enough to match up with the speed of the contractor in laying the pipe so that there were no holdups from delays in the coating operations. The machine was fast enough to coat pipe at a rate that would always insure a reserve of coated pipe in advance of the laying contractor's requirements.
6. The price for the entire work was in harmony with prices quoted in accordance with the usual method of the owner purchasing coating material and having it applied by the laying contractor.
7. The method was of advantage to the laying contractor as it relieved him of all responsibility and attention to the proper coating of the pipe line.
8. The pipe coating was tested with a holiday detector in the storage yard and again in the field just prior to the application of the wrapping. This insured absolute certainty that the pipe coating material was intact and free of holidays, pinholes, carbon deposits or any other defects before the felt wrapper was applied.

At the pipe mill the pipe was cleaned with a WKM pipe cleaning machine and shop coated with Bitumastic 70-B shop coat solution applied by a priming attachment furnished as part of the cleaning machine. This resulted in a very fine job of application of the first coating applied to the pipe, which of course is essential because if anything is wrong with the shop coat it is bound to effect the performance of all other coatings that are later applied on top of it.

Applying Coating

As the cars of shop-coated pipe arrived at Palmer they were shifted into the coating yard. The pipe was unloaded by a crane mounted on a truck and placed on wooden skids arranged so that the pipe could be rolled on the skids up to the center line of the coating machine. As the pipe was rolled along the skids it was cleaned. Any accumulation

(Continued on Page 123)

Lifting coated and wrapped pipe in the field

The HORSEPOWER You Need

A TWO-CYCLE COMPRESSOR UNIT BUILT IN TWO, THREE AND FOUR CYLINDER SIZES . . . TO SUIT YOUR NEEDS.

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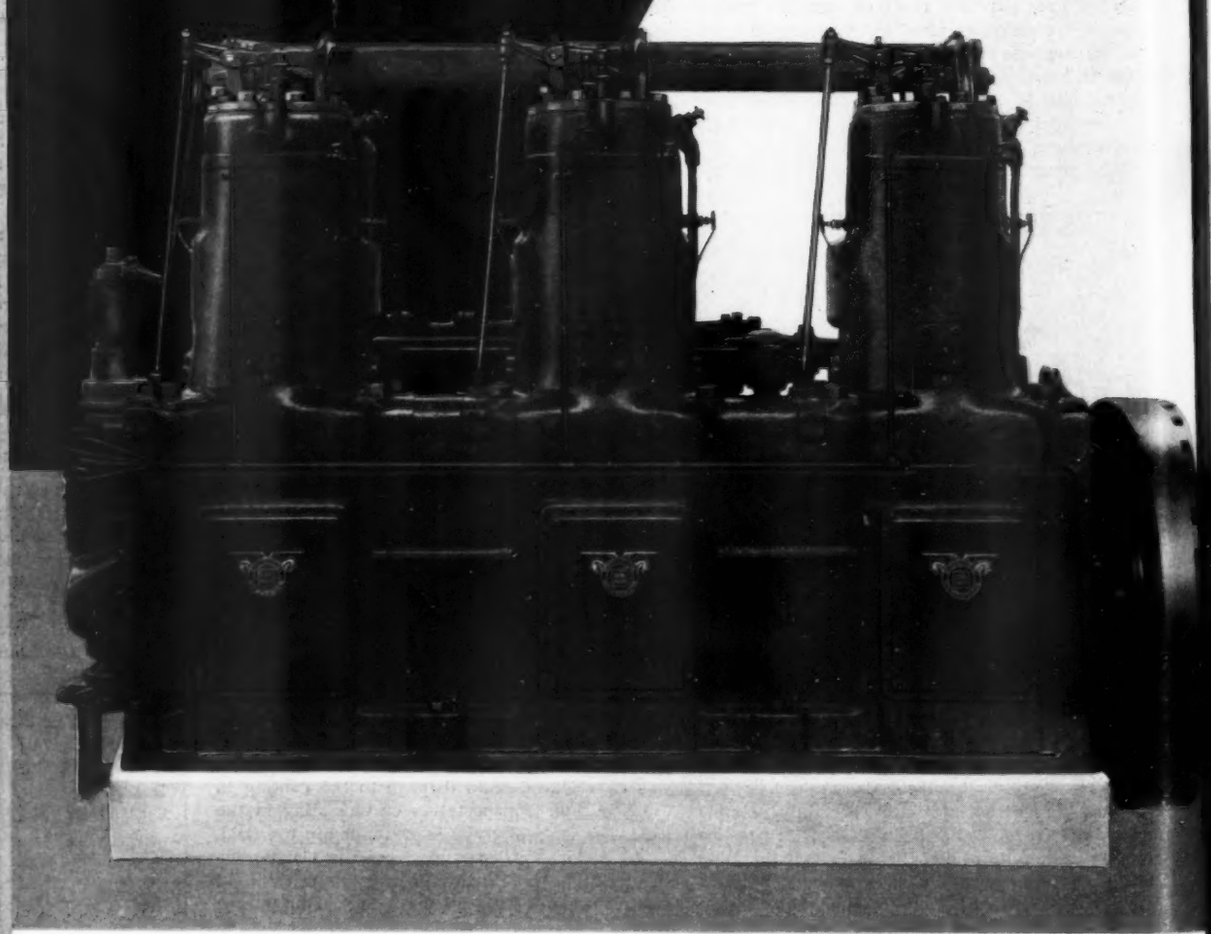

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Stabilization of Crude Oil Field Comes Into General

By MITCHELL TUCKER

Developments in several fields of widely different characteristics indicate that the subject of stabilization of crude oil at the well, or at some central point in the field, is destined to be of major consideration during coming years. The evaporation of valuable fractions from crude oil and natural gas from the time it is produced at the well until it is refined has always represented a serious loss to the petroleum industry. The rapidly changing demands of the refiner for more of the lighter ends of the crude oil and the heavier components of the gas (which are the fractions lost in evaporation or weathering) for processing in polymerization plants and in the manufacture of high octane fuels, makes this evaporation loss even greater.

Rather recent improvements in the judicious handling of the gas-oil mixtures in the field, vapor-tight tankage, and "closed-system" pipe lines, have afforded considerable progress in this direction. Stabilization or vapor-recovery systems in the field are being advocated as a further means of mitigating this loss. The widespread effect that would grow out of the extension of this practice would, for obvious reasons, be felt in the operating, natural gasoline, transportation, refining, and marketing divisions of the industry.

It is not the purpose of this discussion to raise any of the controversial issues incident to the preheating of crude mixtures before delivery to stock tanks, but rather to present some of the details and data available from various types of vapor-recovery systems being employed in representative fields. It can be said, however, that both operating companies and state conservation authorities are looking with increasing favor upon this practice as a true measure of conservation, when properly applied.

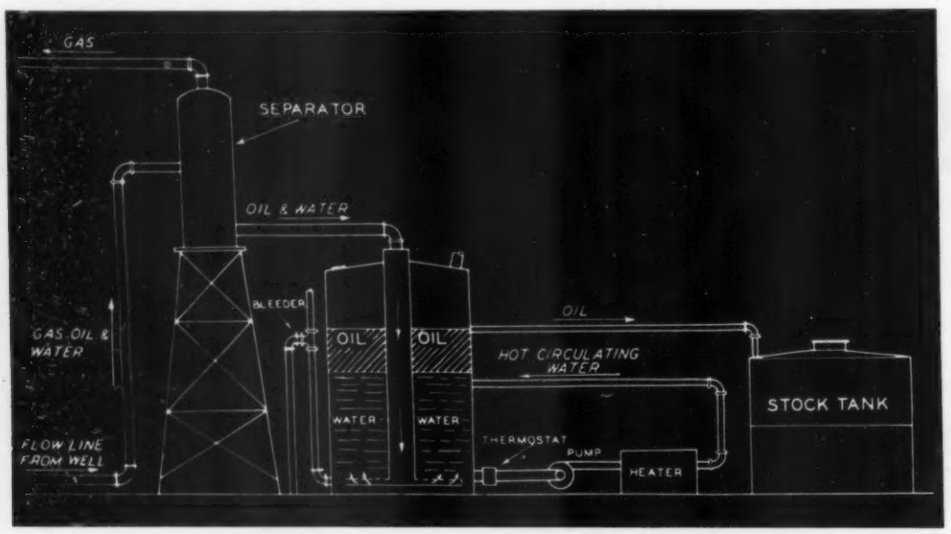

Fig. 2—Common type of lease treating set-up in East Texas field

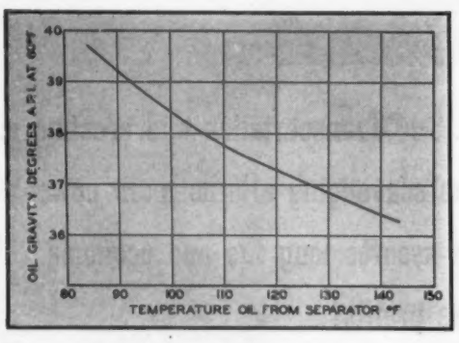

Fig. 4—Relationship between the gravity of the oil and its temperature in the separator based upon experimental data obtained among typical wells in the East Texas field

Tepetate Field

Although this type of work has been carried on in a more or less systematic way in other fields for several years, Continental Oil Co.'s very successful application in the Tepetate field of southern Louisiana has done much to stimulate present-day interest in the subject. Here a combined crude stabilization and absorption natural gasoline plant is employed, having adequate facilities to recover all vapors released from the high-gravity gas-oil mixture due to reduced pressure and increased temperature. Stabilization of crude here is defined as "controlled evaporation in which all desirable fractions are caught and saved instead of being allowed to waste to atmosphere." Full details of the Tepetate installation, and the economies effected therefrom, will be found on page 55 of the May 20 issue of The Oil and Gas Journal in an article by E. O. Bennett and C. R. Williams of the Continental Oil Co.

Rodessa Field

Individual lease vapor-recovery systems have been employed in the Rodessa field for about one year, and have been successful in reducing evaporation losses, cutting or eliminating treating costs, and materially increasing the yield at gasoline plants.

Rodessa gas contains only a very small quantity of the heavier gas components, such as butanes or pentanes, so the stabilization equipment is largely for the recovery of light fractions from the crude oil which are otherwise lost through storage or transmission weathering. To accomplish this the gas-oil mixture is treated to about 120° F. (bottom-hole temperature is about 190° F) just before entering the separator. Automatic temperature-control instruments are used at all installations, the conductor wire being placed in the flow line just as it enters the separator. Figure 1 shows a typical installation in the Rodessa field.

As these were the first of their kind to be made, a great deal of experimental work was necessary. Due to the varying manner of well completion and oil-gas ratios of wells served by different stabilizing assemblies, each installation has been an individual problem in itself. Size of heaters vary, of course, with the number of wells and volumes handled in each separator or battery assembly.

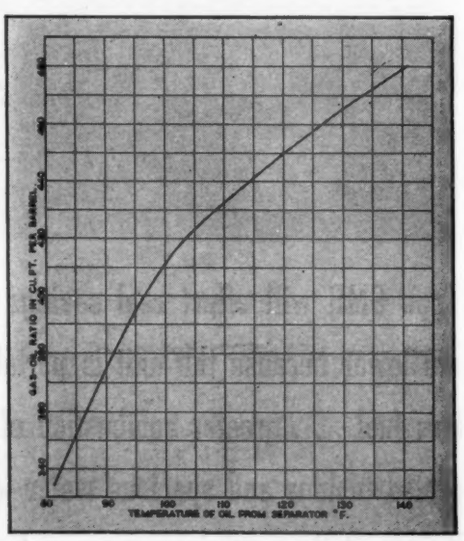

Fig. 5—Relationship of gas-oil ratio to temperature, obtained from experimental data on wells located in the East Texas field

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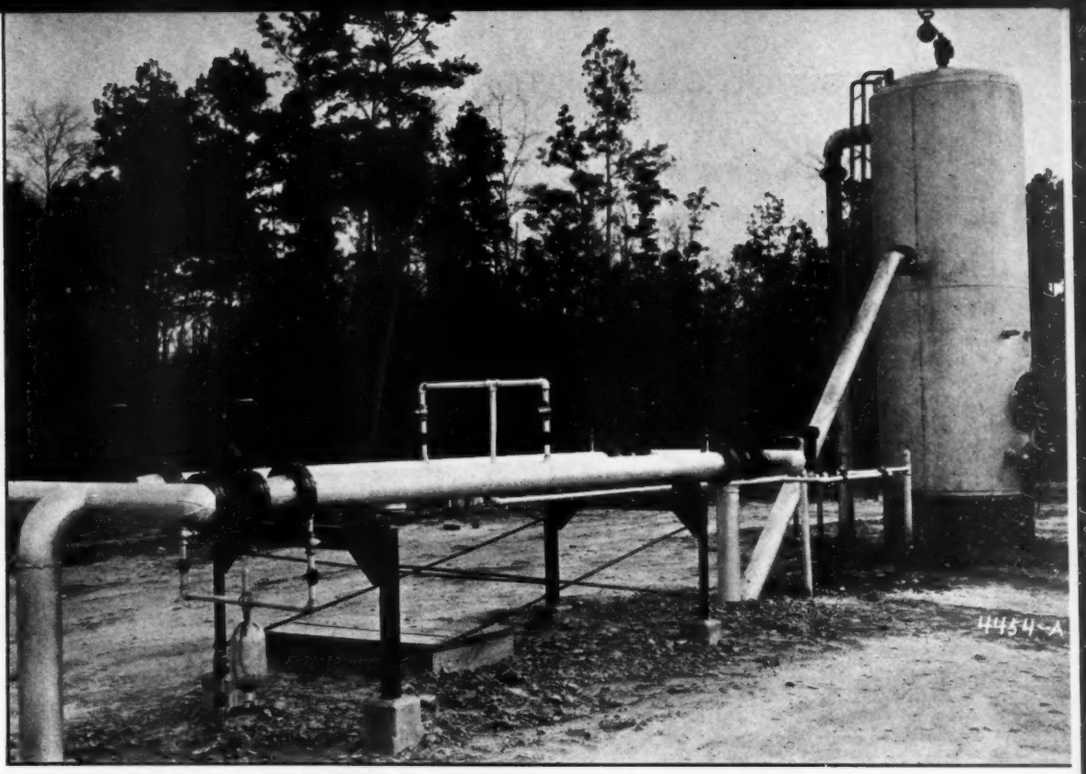

Fig. 1—Vapor recovery system in the Rodessa field as they are now in general use

The lease battery serving an eight-well lease consists of stock tanks, gun barrel, one high-pressure and two low-pressure separators, stabilizing equipment, field pipe line station, and lease boiler station. Due to the variations in open hole in the Rodessa multiple formations, and differences in oil-gas ratios from well to well, the producers on this particular lease are termed high-pressure and medium-pressure wells. The two high-pressure wells flow into a high-pressure separator, gas going off into the fuel system and the oil returned to the header in the stabilizer. The oil from medium-pressure wells is headed up together with returns from the high-pressure separator, and sent through the preheating system, where temperature is raised to the predetermined amount to effect

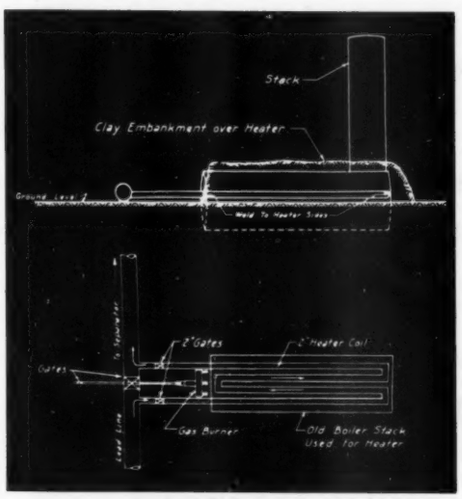

Fig. 3—Typical heater placed on lead lines in the East Texas field

desired results, in this case 120° F. The heated oil then enters the low-pressure separators, where the oil is delivered to gun barrel or stock tanks, and the gas, made richer by vaporization of some of the lighter oil fractions, is delivered into the gas gathering system for transmission to gasoline plants.

Oil from the high-pressure separator and medium-pressure wells is headed up through a 6-inch pipe section, from which two to four heating sections extend (depending upon the volume and number of wells to be handled). Leading from the header section, 4-inch nipples go into 4-inch gates and 4 by 6-inch swedges direct flow to the flange connecting the heating sections. These units consist of three-quarter inch copper pipe sections placed inside the 6-inch by 12-foot pipe. At the oil outlet end the heated fluid is again headed up through a 6-inch header and delivered into the low-pressure separator, thence to the oil stock tanks and gas system, respectively. Steam from the lease boiler station is introduced by automatic temperature controls through 1-inch pipe to each of the heating sections at the oil outlet end, circulating around the copper oil-containing pipes, and discharged at the oil inlet end through an automatically operated condensing trap into the water pit.

East Texas Field

The large production volumes, high-gravity crude, and rich gasoline content in the gas-oil mixture, has prompted many forms of field stabilization in the East Texas field. The joint facilities of Hanlon-Buchanan, Inc., and Humble Oil & Refining Co. recently established in that field to gather, store, and transport the heavier gas components in a liquid form has again focused attention upon the economies which may be expected from some form of stabilization in the field. Heretofore, the inability to utilize the butanes and pentanes given off by local heat application has constituted one of the greatest objections to the practice. However, this is now largely removed.

The application of heat to oil before reaching the stock tanks in East Texas has been made for three purposes: (1) for the separation of oil-water emulsions, (2) for the removal of paraffin in lead lines, etc., and (3) as an attempt to stabilize the crude oil by removing and recovering the lighter hydrocarbons often lost due to weathering and transmission of the crude. The elevation of separators to permit operation at minimum pressures is also almost universally used by those operators equipped to recover the increasingly rich vapors resulting from the practice. And, in many cases the heating and elevation of crude before delivery to stock tanks has been done at the same installation.

The Texas Railroad Commission's present ruling on this practice is included in the Oil and Gas Docket 120, dated December 3, 1936, reading as follows:

"The application of any heat to crude petroleum oil before it is measured for allowable purposes is hereby prohibited except that heat may be applied to production from wells that are making the emulsion (b.s.) water and oil, for the purpose of aiding in separating the emulsion, but in no event shall the heat applied be more than 140° F., or the pressure less than atmospheric."

A subsequent ruling was issued on the exact point of heat measurement, which stated that "temperature shall be recorded at the point of separation of oil and gas, whether this separation occurs at the separator, gun barrel, or otherwise."

Approximately 10 per cent of East Texas wells produce water in an emulsified form with the oil, and heated separation is almost universal due to the more rapid and complete separation as compared to gravitational systems. Many methods of applying heat to the oil-water mixtures are used, including a wide variety of efficiently manufactured treating systems. A typical lease setting is shown in Figure 2.

Oil from the flow lines goes directly to the conventional oil-gas separator, which is elevated to a level above the top of the wash tank in order that a minimum pressure will be necessary in dumping the separator. Separated gas vapors go out the top, and oil goes into the wash tank through a flume running from top to bottom of the tank where the oil is released through a spreader. The wash tank is kept about one-third full of water, at a predetermined temperature for efficient operations, usually about the same as bottom-hole temperature,

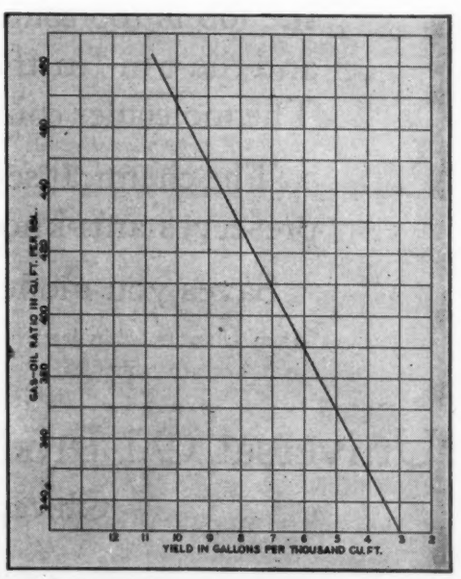

Fig. 6—Relationship between the gasoline yield from gas and the gas-oil ratio, among typical wells in the East Texas field

DON'T KILL 'EM - STUN 'EM

You can poison the u h m* in cracked gasoline with sulfuric acid and drag them out feet first but some of the gasoline and a lot of its anti-knock value go to the morgue with them

That's mighty expensive It's better just to stun them

That's what the chemical sergeant does He marches in when the job is too tough for the chemical cop He paralyzes the u h m and the o m** in the air so they can't get together and form gumbugs The molecules come to later and do their proper work in the engine

The chemical sergeant saves the cost of acid, saves loss of gasoline, preserves anti-knock value

Saves you money

*u h m Unsaturated hydrocarbon molecules
**o m Oxygen molecules

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

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or 146° F. Oil is drawn off near top of the fluid level, and excess water is drained from the bottom of the wash tank for reheating and circulation back through the wash tank.

Vapor Recovery Systems

Many designs of heaters have been employed in field vapor-recovery systems in East Texas. Figure 3 shows one common device which is placed on the lead line from the different wells on the lease to the separator. This particular unit has been in operation on several leases producing b.s. and water, and an experimental installation was

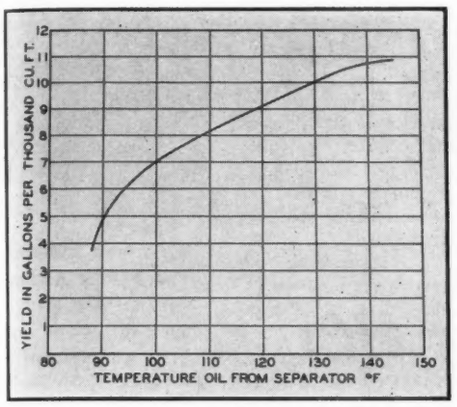


Fig. 7—Variation of gasoline yield with temperature of the oil in the separator

made upon a lease producing no water to determine the effect of stabilization upon the crude oil. The tests were conducted over a 24-hour period, taking samples of oil each hour before and after passing through the heater, and a sample of gas at the separator tested each hour. The rate of flow of the

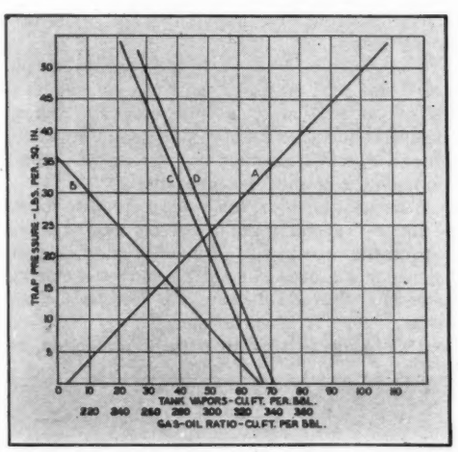


Fig. 8—Curves showing direct relation between trap pressure and stock-tank vapors in East Texas field

(A) Variation in amount of vapors passing from trap into stock tanks at various trap pressures. (B) Gas-oil ratios plotted against trap pressures; trap gas only having been metered. (C) Gas-oil ratios plotted against trap pressures; gas volume being sum of trap gas and tank vapors separately metered. (D) Check on Curve C. Gas volume determined by measuremeter.

oil was approximately 40 feet per minute, 240 bbls. daily, or 5 bbls. between tests. Data obtained from this experiment were used in constructing the following described curves.

The gravity-temperature curve shown in Figure 4 indicates a difference of 3.3 degrees in A.P.I. gravity between the oil before it was heated and after it was heated to 140° F.

Figure 5 shows the relationship of gas-oil ratio to temperature. Here a gain of 104 cubic feet per barrel of oil treated is shown, representing a gain of 24,960 cubic feet of gas in treating 240 bbls. of oil over a 24-hour period. Just how much of this would have remained in solution at atmospheric temperature, to be later lost in weathering or evaporation, was not determined.

Figure 6 shows relationship between the gasoline yield of the gas and the gas-oil ratio. It will be seen that the gallons per minute of the cold oil is 3.8, but at 140° F. the gasoline content is 18.8 gallons per 1,000 cubic feet, or a net gain in recoverable gasoline of 7 gallons per 1,000 cubic feet.

Figure 7 shows the variation of gasoline yield of the gas with the temperature of the oil in the separator, indicating about a 250 per cent increase from atmospheric temperature of about 85° F. to 140° F.

The maintenance of minimum trap pressures has long been practiced as a vapor recovery measure in East Texas. In order to determine the volumes of vapors that are carried over from the gas traps to the stock tanks at various pressures, a series of tests were recently made. Figure 8 (line "A") indicates a direct relation between trap pressure and stock-tank vapors, establishing the fact that the lowest practical pressure will result in greatest vapor recovery to the gas system, with minimum vapors remaining in the oil to be lost by evaporation.

Transportation Losses

Following the contention that some serious losses were being recorded by pipe line companies from the point of storage in the field to the delivery point on the Gulf Coast, tests have been made to determine actual losses in this respect. Some losses had been reported as high as 2 degrees A.P.I., but recent tests indicated a maximum loss of about one-half degree, A.P.I. corrected.

Disposal of Salt Water in the English Bayou Field

By F. L. SINGLETON

The evaporation of salt water by the use of burning flares over a salt water disposal reservoir is being successfully done by a unique method recently installed by engineers of Fohs Oil Co. in the English Bayou field, several miles northeast of Lake Charles in Calcasieu Parish, Louisiana.

This field which is in its third year of development is located near fresh water, on the edge of the Calcasieu River and at one time the operators were confronted with the problem of disposing of approximately 2,000 bbls. of salt water per day without causing pollution. However, by a well planned program of plugging back and recompletion, the volume of water has been reduced to approximately 500 bbls. per day and that which had already been produced is being disposed of at the rate of 600 bbls. per day, or 100 bbls. more than the field is producing.

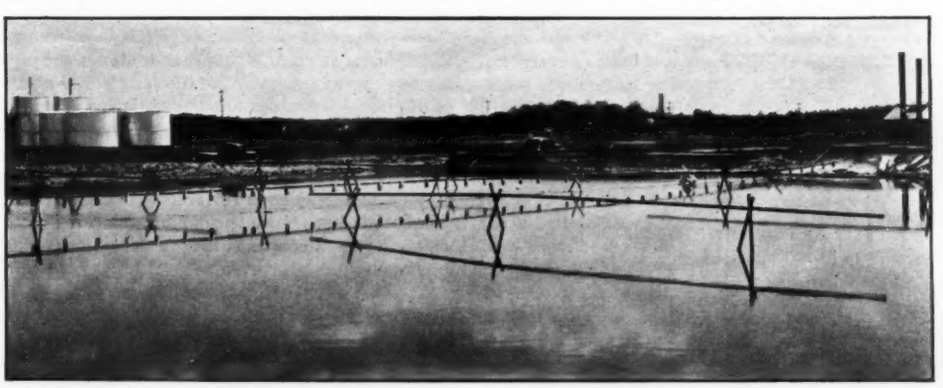
While the volume of salt water was at its peak, it was stored in two earthern reservoirs. One of these was 300 by 200 feet square holding 3½ feet of water, while another 300 by 300 feet square was built by the use of drag lines to hold 5 feet of water. These reservoirs are connected by a 4-inch line to a 750 gun-barrel tank, set up at the seven wells which are producing salt water, and is picked up and placed in a third reservoir by a 7 by 4½ by 10-inch gasoline pump.

This third reservoir, 180 by 180 feet square and holding 3½ feet of water was constructed to increase the evaporation of the water in the two larger reservoirs which is being done by using excess gas from producing wells, ordinarily burned off by flares. Consequently the operation of this system is inexpensive.

A 200-foot section of 2-inch pipe connects with the company's 4-inch gas system and extends across the reservoir approximately 160 feet. The section of pipe over the reservoir has been perforated every 30 inches with a three-sixteenth inch hole and is laid on top of the cross section of old 2-inch pipe driven in the ground about 3 feet apart.

To prevent the flares from being blown out, "air-mixers" made out of second-hand 4-inch pipe and cut to about 4 inches in length have been flanged on top of the 2-inch pipe and dropped around each perforation. As operated at the present time, there are a total of 45 drops, about 12 inches above the top of the water.

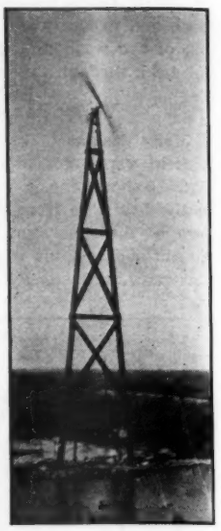
After two weeks of continuous burning, the flares have to be turned off and the pipe and drops cleaned.



Salt water reservoir with gas flares extending above surface of water

What Voltage Needed to Protect Pipe Lines?

By D. B. GOOD
Texas Empire Pipe Line Co.

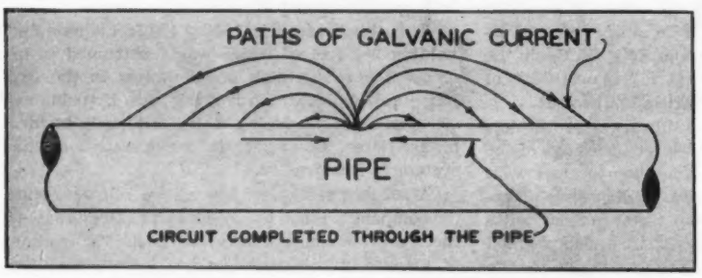


Wind-driven generator near Port Arthur

Cathodic protection is defined as that method whereby an outside source of power is used to impress a negative potential upon a substructure in order to protect that structure from corrosion or electrolysis.

Most of the endeavors to date have been confined to pipe lines, whether they be gas lines, oil pipe lines, or water mains. Also a great deal of work has naturally been done by companies maintaining other underground structures, such as telephone cables in lead sheaths, but these companies have been mainly active in corrosion and electrolysis mitigation in localities where stray power currents from electric train or street car operations and grounded return circuits are the offending factors.

For quite a number of years it has been the general practice in pipe line construction to coat the lines that are buried in the soil, in order to protect them as much as possible from the action of corrosive soils and this in order to obtain an extended pipe life. As there is considerable money involved in the pipe lines throughout the country we can readily appreciate the growing importance of any method which will protect this investment, or cut down the operating costs by retarding or eliminating corrosion, with the subsequent pit-leaks, oil losses, damages from oil losses, cost of repairs, and loss of operating time due to repairing the line in case shutdowns are necessary.



Sketch 1—Galvanic action on pipe line

Ground bed or anode

Although coatings have been greatly improved in recent years, after several years of service underground, all coatings now in general use on pipe lines develop fractures, moisture works its way through and corrosion begins in a more or less active fashion depending upon local conditions that have a bearing on rates of corrosion. As a matter of fact it is not necessary even for an elapsed time to take place before corrosion in numerous places on a pipe line becomes active, as innumerable holidays or pin holes are existing at the time of burial. Procedures of testing the pipe line coating by electrical means before it is laid in the ditch have greatly improved the general coating job and eliminated thousands of prospective points of corrosion and possibly pit leaks, but even so, there are so many pin holes left open that doubt has been expressed by some as to the advisability of coating a line at all. Others advocate just coating it in certain places, which by soil tests and other conditions are indicated as being positive corrosive areas. A coating job should be as nearly perfect as possible because longer pipe line operation is assured before application of cathodic protection; and with cathodic protection, the energy required per mile is less with good coating, the distance between drainage points can be increased, and equipment investment is lowered.

We will briefly review the theory of corrosion in order to correlate it with our discussion relative to mitigation by electrical means.

The generally accepted theory is that corrosion is electrochemical in nature, i.e., involving galvanic electric currents as well as chemical changes in the process of iron or steel leaving the parent metal, and occurs because of the prevailing tendency of metals to revert to a more stable condition. In the case of iron placed in contact with moist soil or water, hydrogen is liberated and forms a surface film, which is protective to the metal as long as it so remains, but in most cases the film is destroyed by uniting with oxygen forming water or it goes off as a gas. In galvanic action (Sketch 1) current leaves the pipe at the point of pitting, flows through the soil for some distance, returns to the metal at various places and follows the pipe back to the original point of discharge. The points of discharge are called anodic, while the points of pickup are called cathodic. Oxygen does not have to be present at the anodes, but oxygen at other points on the steel pipe surface greatly helps the process. This might be referred to as Type 1.

Another type is that commonly referred to as long-line current. In this case the circuit itself may be of several feet or even several miles in length (Sketch 3). The current is accumulated over great lengths of pipe and often discharged at one or more points of low soil resistivity or in anodic areas. Of course, iron is taken off the pipe where this current leaves the ground.

Yet another type is referred to as direct chemical action. In this case the probable galvanic currents follow such minute routes that no measurements of them can be made.

Corrosion by electrolysis is yet another severe form of loss of metal from currents as shown in Sketch 4.

The pipe lying in the ditch or soil assumes a certain potential with respect to the earth itself (Sketch 5-A). For sake of convenience in this discussion we will assume that the pipe line lies in the country, away from the city and is not affected by induced currents, stray power currents of direct nature, pick-up of currents from nearby structures or substructures in contact with our pipe line; all these complicate the picture, giving the pipe a potential to the earth of fast changing values in most cases, not only in direction and amount, but varying radically in very short distances along the pipe line. These cases can usually be dealt with but often require careful study and special consideration.

We have thus adopted the theory that the pitting of the pipe is due to the fact that current is leaving the pipe at some point or points and returning to the pipe at some other point or points, either very close together or miles apart, depending upon the circuit that is set up.

If the above general theory be correct we should be able by reversing the process to impose potentials on the pipe in such a manner as to counterbalance and exceed in some measure the existing potentials, thus eliminating the reasons for corrosion.

This brings us then to cathodic protection, be-

Testing coating by electrical means for "holidays" which usually prove costly

Faster Hole-making —Greater Profits —with Mechanical BRIDGEPORT ROTARY DRILLING RIGS

Illustration:
R. E. Garden & Son, well known Mid-Continent Drilling Contractors and Producers, rigging up their Model TD-32 Bridgeport Mechanical Rotary Drilling Rig north of Nickerson, Kansas. Foreground (front row) left to right: E. J. Kelly, Allis-Chalmers Mfg. Co.; Lee Fagg, American Well & Prospecting Co.; Bob Garden, Driller; Jock Garden, Contractor; Jim Wiley, Engineer, Bridgeport Machine Co.; (back row) Joe Borg, American Well & Prospecting Co., Napolian Gatlin, Tool Pusher

THE RIG
Bridgeport Model TD-32

Powered with two 325 H. P. Waukesha gas-gasoline-butane six cylinder Engines, transmitting power to the No. 180 Gumbo Buster Unit Jack Shaft Draw Works and to the 7¾" x16" Type FXQ Gardner-Denver Power Slush Pump, through Allis-Chalmers Texrope Drives and Rotating Elements . . . . . Bridgeport Utility Plant, Gumbo Buster Table, Swivel, Traveling Block, Crown Block, etc. For complete mechanical specifications ask for Bulletin No. 60.

Here is a fast hole-maker—a compact rig, handy to operate, economical to own, and extremely flexible—a profit-maker for the operator.

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Sketch 2—Electrical currents set up by pipe line passing through a creek or pond

ing so-called because the pipe is made negative to soil and is forced to pick up current from out of the ground; said current being discharged from an auxiliary ground bed or anode, usually some several hundred feet away from the pipe (Sketch 6). In this process a hydrogen film is built up on the pipe at the points where the current enters the pipe through the minute holes in the protective coating and corrosion is stopped.

An example of a cathodic setup for the electrical protection of a pipe line could be described as consisting of a motor-generator, or some other type of converter in order to convert from alternating current power to the necessary direct current power, supplying a source of direct current, say for example, 15 amperes at 15 volts. The negative of the generator is connected by suitable wire to

Coupon attacked by electrolysis action—one with hole connected to pipe, other free

the pipe line and the well-insulated positive feeder is connected to the auxiliary ground bed or anode, say 200 feet away from the pipe. This anode could be composed of junk pipe, cast iron, or carbon rods set in coke, buried several feet in the ground and in a place where a constant source of moisture or water prevails, in order to keep as low as possible the total circuit resistance which is composed in main, of the ground bed contact resistance to earth. With the direct current power on, the current leaves the ground bed, scatters out in a "fan" fashion through the earth, enters the pipe through the numerous openings or holidays in the coating, and then returns through the pipe line to the point of negative connection. It is evident that the anode will be acutely attacked by electrolysis.

The difference of potential between the pipe and soil is measured with a McCollum earth current meter, having a resistance of 1,000,000 ohms per volt, and a nonpolarizing copper sulfate electrode. The standard copper sulfate electrode gives a practically unvarying potential in any electrolyte. Common values encountered before application of electrical drainage are 0.55 to 0.60 volt with steel pipe negative to copper sulfate electrode. The constant for the pipe generally encountered is about 0.57 volts, pipe negative to electrode.

During the application of cathodic protection the potential difference between the pipe and soil builds up day by day, noticeably so for several weeks, at which time a nearly constant potential is observed (Sketch 5).

Anode Construction

The anode construction, its location, and treatment are quite an important part of the electrical setup. Often ice-cream salt or other similarly acting chemicals are used to treat the soil immediately adjacent to the anode in order to lower its contact resistance. We can readily see that if the total circuit resistance for such an arrangement is high, say 2-3 ohms, we will need a greater number of volts to force a certain number of amperes through the soil to be picked up by the pipe, than if we maintained a lower circuit resistance, of say 1 ohm, or as low as economically possible or plausible. A series of interconnected separated ground beds will give a resultant lower contact resistance to soil than a single ground, however large. In the Gulf Coast area circuits of 0.3 and 0.5 ohms are encountered, while further north in Illinois, for instance, around the Lake Michigan area, circuits of 2 ohms are common.

The plan of cathodic protection can generally be economically applied only to lines that have a coating or insulation of some sort on them, and to lines that are electrically continuous. If the line is entirely bare or devoid of insulation, we are confronted with changing the potential to soil of a great area of bare metal. The current forced from the anode rushes in and is picked up almost entirely in a very restricted length of pipe, near the point of negative connection, of course lowering somewhat the potential of the pipe to soil at that point or nearby points, but not giving any effective spread. Recently there have been improvements or indicated changes in the possible ways of arranging ground beds or anodes, which, to some extent eliminate the economic impracticability of cathodically protecting bare or nearly bare pipe. This employs the use of a distributed anode system. Current densities are lowered for certain points on the line and adjustments are made for regulation by changing the output from each of the distributed anodes so as to obtain a more flat potential curve of pipe to ground potentials. Entirely bare surfaces can be cathodically protected, such as tank bottoms, ships, uncoated pipe lines, and the like, but in most cases it is not economically practical to do so, except perhaps in some particular cases, such as submarine crossings, or pipe under pavement, where leaks are very difficult to repair. It does not appear practical to protect the interior of a water line because of the difficulties of returning the current through the water.

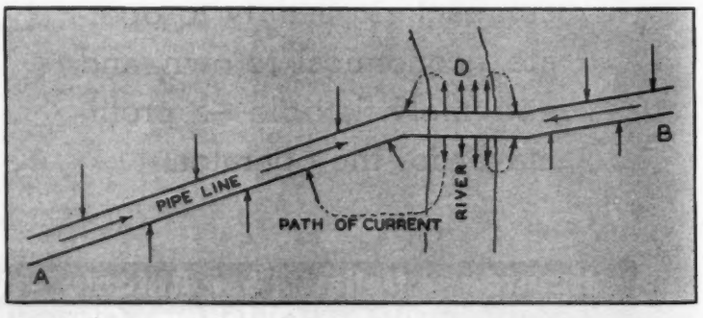
Pipe Insulation

Thus. we see that the better the coating or insulation the more effective will be our attempts at cathodic protection, greater will be the length of pipe we can protect, and less the cost per mile to do it.

Corrosion of pipe over a portion of the line not protected by cathodic unit

A logical question now to ask is, "What potentials of pipe to soil are needed in order to fully protect the line from all corrosion." It was found by laboratory tests and by tests in the field under operating conditions that if the substructure is maintained 0.30 volt negative to soil that no corrosion can or does take place. Some experimenters and engineers used 0.40 volt to start with but ended up in field tests with 0.25 volt as the maximum needed to arrest corrosion. The potential to a copper sulfate electrode to which a pipe must be lowered in order to stop corrosion is probably in the neighborhood of 0.85 volt, pipe negative to electrode.

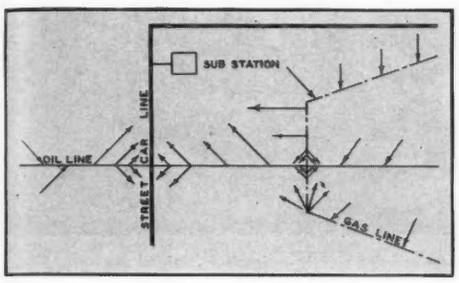
Definite cases are now on record, showing the effectiveness of this method of arresting corro-



Sketch 3—Circuit of long-line current. Points A and B are several miles from river crossing. Pipe from A and B to river is cathodic. Pipe section submerged in river is anodic

sion. Numerous gas and oil lines in Texas, Louisiana, California, Oklahoma, Illinois and other places are receiving protection through marshy, swampy land or in soils considered corrosive to buried structures, or in areas affected by stray power currents. In this latter case drainage is usually accomplished by bonding substructures to negatives of substations and to each other wherever possible. In quite a few cases reconditioning jobs have been forestalled by applying protection, as corrosion can be arrested in any stage of its operation, and its effectiveness is not dependent upon the cause or characteristics of the corrosion which it inhibits. In such cases considerable money has been saved by the application of cathodic protection.

Methods of testing for range of protection or length of pipe line being favorably affected are:

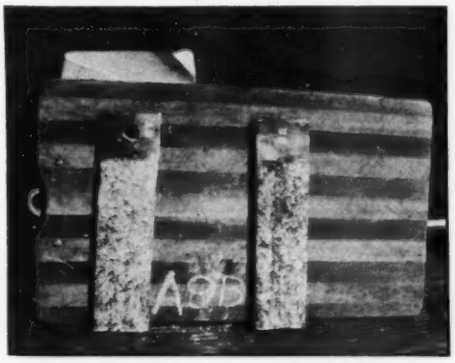


Sketch 4—Electrical circuit for electrolysis

First, by measuring the potential of the pipe to soil with the McCollum high resistance earth current meter and standard copper sulfate electrode; second, installation of corrosion test plate to pipe, and measuring the flow of current either to or from the pipe to plate; third, quick test using potassium ferrocyanide; and fourth, installation of weighed corrosion coupons, one attached to the pipe, the other free in nearby soil. In this case the coupons are left buried for any period of time desired, preferably at least several months at the end of which time they are dug up, reweighed, and their condition noted. If the coupon attached to the pipe is not corroded and has not lost weight, we have a good check on the effectiveness of cathodic protection at that point.

What Is the Cost?

Another question that can be asked is "How much does it cost to cathodically protect a pipe



Corrosion coupons in protected area from cathodic unit, Coupon 4A attached to pipe, 4B was free of the pipe line

line." This of course, depends upon the size of line, kind and condition of coating, the extent of pipe that can be protected from one unit, the location of the pipe line, connections to other lines, and cost of electric energy, etc. The power consumption will vary with the non-conductance of the coating and the number of abrasions or holidays in it. Also for various parts of the country marked differences in soils and consequently differences in total circuit resistance are encountered, which affects the cost of protecting a unit length of pipe.

Starr Thayer (United Gas System, Houston, Texas) gives a few figures on some costs in his experience of cathodic protection as follows:

	Cost of Protecting
1. A 6" line coal tar enameled	$ 3.00 per mile per year
2. An 8" line coal tar enameled	$15.60 per mile per year
3. A 14" line, greased	$590.00 per mile per year

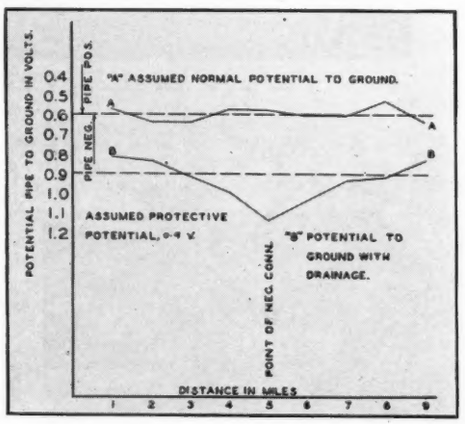
Note: The greased line not fully protected.

A figure at hand, from an operating unit shows $11.00 per mile per year for a 12" asphalt coated line.

A gas line in Louisiana reports a cost of $34.00 per mile per year for a 22" line; this is for power cost only.

Cathodic Protection

Zinc cathodic protection for bare pipe has been tried in some cases. The amount of protection from



Sketch 5—Potential of pipe to ground

such installations is somewhat limited. Ford, Bacon, and Davis report some following figures:

Size of line	Cost per mile per year
4"	$ 49.00
6"	63.00
8"	73.00
10"	91.00
12"	106.00

The Texas Pipe Line Company through J. L. Culbertson, chief engineer, was an early experimenter in the use of wind-driven generators as applied to the cathodic protection of pipe lines. The operation is necessarily intermittent, but due to polarization, definite good effects can be obtained from such installations and the power cost is very low. Several are in operation in the vicinity of Port Arthur, Texas, and numerous ones throughout Texas. In conclusion:

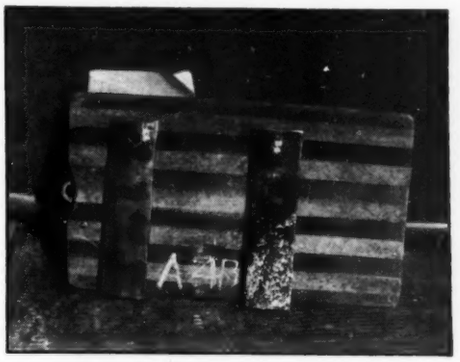
Pipe Coatings

A reasonably well coated pipe line can be protected economically against corrosion, and this method of cathodic protection should be, in all cases, considered as a means of keeping a line in operation, as against the cost of reconditioning. The costs of cathodic protection are usually small as compared to any reconditioning program.

Its effectiveness is not dependent upon the cause or characteristics of the corrosion which it inhibits.

It does not add any electrical danger to locations where used, is simple in operation, but requires careful consideration in installations and in checking effectiveness of same.

If desired to apply cathodic protection to a pipe line, the coating job should be nearly perfect as it



Large pit from electrolysis

reasonably can be made. It is believed that in general, all pipe lines should be so designed that cathodic protection can be applied when and if so desired.

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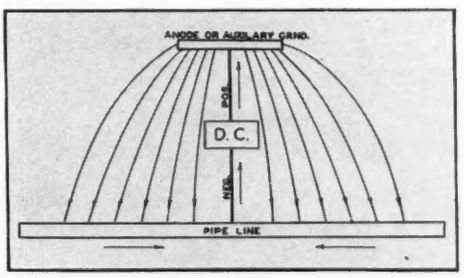

Sketch 6—Fundamental circuit for cathodic protection of any pipe line

Change Stoddard Solvent

The National Association Institute of Dyeing and Cleaning, Inc., has requested a change in the Recommended Revision of Stoddard Solvent, Commercial Standard CS3-28, circulated to the industry for acceptance January 12, 1937, to insert a 50 per cent distillation requirement in paragraph 11a of the recommended revision, TS-2330. That paragraph will then read as follows:

"*Distillation range.*—When a sample is distilled in accordance with paragraph 20, not less than 50 per cent shall be recovered in the receiver when the thermometer reads 350° F. and not less than 90 per cent when the thermometer reads 375° F. The endpoint (maximum distillation temperature) shall be not higher than 410° F."

Discussion Requested

In the June 3 issue of The Oil and Gas Journal, page 42, a paper by John T. Hayward, Barnsdall Oil Co., Tulsa, on "Cause and Cure of Frozen Drill Pipe and Casing," was published. This paper has created considerable interest and the author will welcome any comments or discussion on this subject sent to him at the above address.

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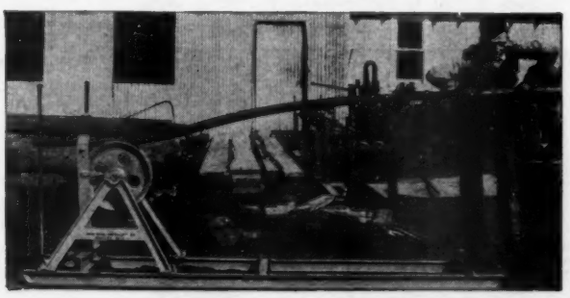

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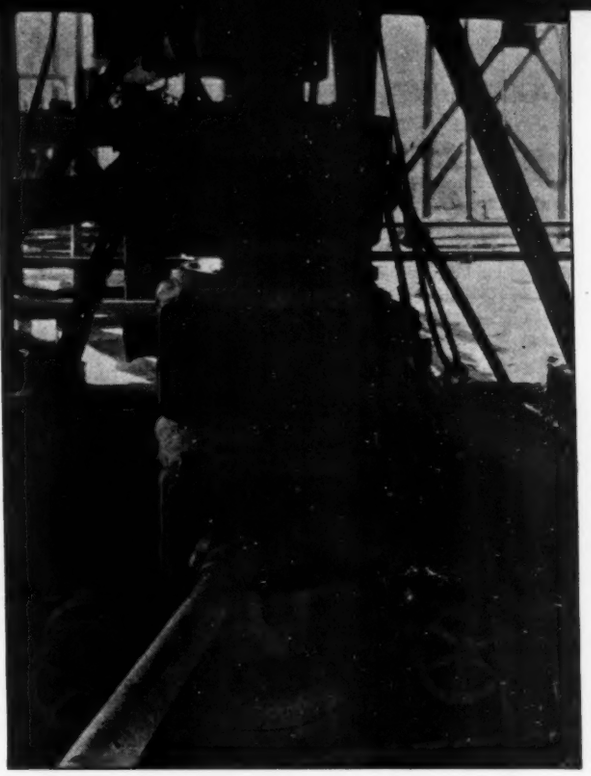

Fig. 1—Hook-up used in drilling Continental Oil Co. No. 1 Hebert, Abbeville, Vermilion Parish, Louisiana. The well was drilled to 11,732 feet and encountered formation pressures exceeding 3,000 pounds per square inch

Development of unprecedented surface pressures in several deep wells completed in the Gulf Coast area during 1936 has prompted thoughtful reconsideration, on the part of substantial operators and contractors, of drilling and completion control practices in known high-pressure fields and in deep wildcat prospecting. The necessity to exercise constant and positive restraint over formation pressures sufficiently high to record 5,000 pounds or more at the surface, as in the case of Stanolind Oil & Gas Co. No. 1 Candelari, drilled on the outskirts of Houston, Tex., has compelled the revision of certain methods and the augmentation of control equipment previously judged adequate for drilling and completing shallower wells in lower pressure formations.

Disregarding the consideration of circulating fluid, always the primary line of defense against pressures, it is attempted here to deal only with the mechanical equipment required for fast, positive and thoroughly dependable control of well pressures. In general, no changes of importance have been essential in the drilling control equipment used on the surface casing, through which hole for an intermediate casing string is made. As a rule, this equipment is of 3,000-pound test pressure design, with substantial factors of safety, and is considered adequate for control of any pressures that might be encountered down to 6,000 or 7,000 feet. At or near these depths it is deemed sound practice to set and heavily cement a protection string of pipe. Heretofore, in the case of wells drilled to maximum depths of 6,500 to 7,000 feet, in which an intermediate string of casing was used, it has been customary to flange the surface casing control hook-up to the intermediate string by means of a reducing flange, and continue the hole to the producing sand. In the case of today's deep wells in the Gulf Coast, however, the present generally accepted practice is to flange on a drilling control hook-up of a size corresponding to that of the intermediate casing string—usually 10¾, 9⅝ or 8⅝-inch. This hook-up is almost invariably 5,000- or 6,000-pound test pressure design, with adequate factors of safety, capable of closing against and holding the highest pressures yet recorded.

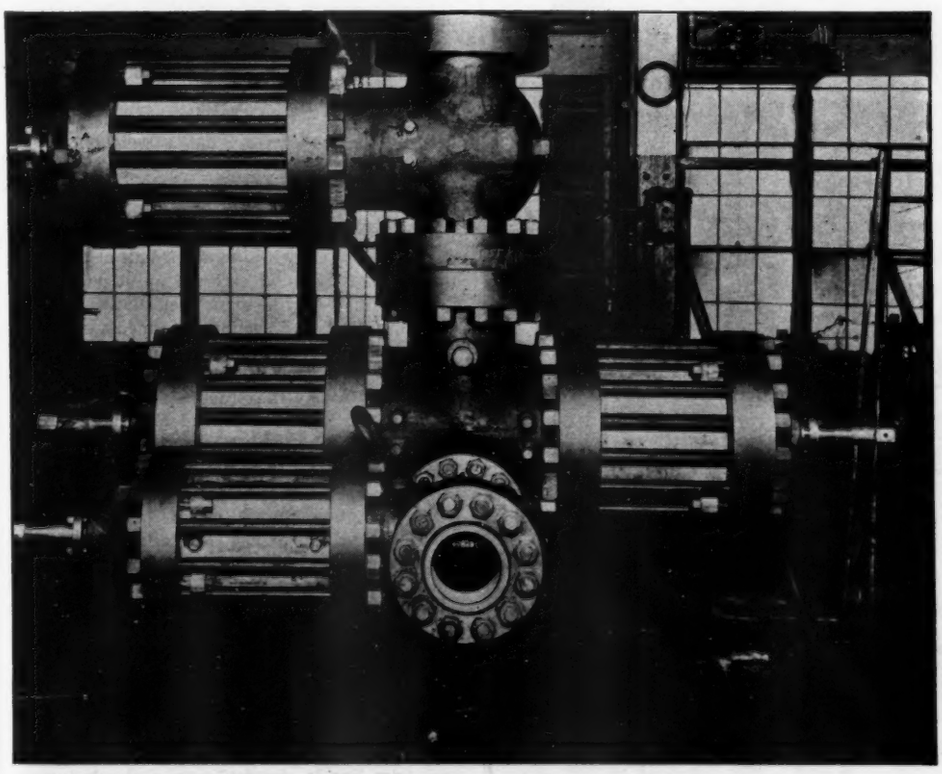

Fig. 2—Hydraulically operated drilling control hook-up of 6,000 pounds test pressure used in drilling a high-pressure well in the Old Ocean field of Texas

Aside from the many other advantages provided by a protection string of casing — including its safeguarding of unconsolidated upper formations against exposure to high pressures from lower formations, with consequent danger of cratering around the surface pipe—it permits some reduction in size of the higher test pressure control hook-up. In addition, it supplies a pipe foundation of substantially higher test pressure on which to install the control devices. Cost of the heavier equipment is thus reduced; less room is required under the derrick; the hook-up is more convenient to install; and, of marked importance, the smaller gate or ram areas exposed to well pressure greatly facilitate manual closing of the control units should pressure not be available when required in an emergency.

Typical Hook-ups

Two examples of typical 6,000-pound test drilling control hook-ups are shown in Figures 1 and 2. The hook-up shown in Figure 1 was used in drilling Continental Oil Co. No. 1 Hebert, Abbeville, Vermilion Parish, Louisiana, by Loffland Brothers Drilling Co. This well was carried below 11,000 feet and encountered more than 3,000 pounds formation pressure. From the bottom, the hook-up consists of a mud-cross, a control gate with pipe rams, a control gate with complete shut-off rams, a third control gate with pipe rams and, on top, a pack-off type blowout preventer. All units are 9⅝-inch size, 6,000-pound test pressure.

The pack-off type preventer is installed primarily as a rotating head in event of necessity to circulate and keep the pipe moving while holding the annular space sealed. Movement of the pipe, of course, definitely reduces the danger of a stuck string. By concentrating on the pack-off rubber all

wear occasioned by rotating and raising and lowering the drill-pipe between tool joints, packing elements in the ram-type preventers below are maintained in perfect condition. Replacement of worn pack-off rubbers, when this becomes necessary, is effected by transferring well pressure temporarily to the closed rams of one of the ram-type preventers below.

Figure 2 shows a 10¾-inch, 6,000-pound test pressure, hydraulically operated drilling control hook-up recently constructed for Harrison & Abercrombie, and used in drilling No. 3 Bernard River Land & Development Co., Old Ocean, Brazoria County, Texas, which recorded a shut-in pressure of 4,150 pounds when completed. This well, bottomed at 10,427 feet, and producing from 10,293 feet, has a flow pressure ranging between 3,800 and 3,900 pounds. The hook-up consists of a double flanged model ram-type blowout preventer, a double flanged model ram-type master gate valve, and a double flanged model ram-type flow-line gate valve. The fluid manifold on this hook-up was also of 6,000-pound test design and included individual 6,000-pound test, 1½-inch angle valves installed directly on the opening and closing ports of the three control units. These valves provide a safe, positive means of locking the control units in the closed position when hydraulic closing pressure has been applied. They also supply an emergency means of holding high closing-pressures on the control units should any part of the manifold, toward the pumps, fail. In addition to an integral 7-inch flow-line opening below the rams of the preventer, a separate 2-inch opening, fitted with a 6,000-pound test gate valve, is provided so that well pressure, if desired, may be connected directly to the closing side of the ram operating pistons of all three units.

These minor innovations are mentioned to emphasize the thoroughgoing attention to detail which is being applied in designing and assembling the higher test pressure control hook-ups. Nothing is being overlooked in the effort to eliminate weak links and to assure positive mastery over anticipated high pressures.

To permit landing, suspending and sealing the oil string through the drilling control hook-up before starting cementing operations, and to provide greater latitude in final spotting of the casing than has heretofore been possible, a unique new type of casinghead was developed recently at the instigation of Harrison & Abercrombie, for use at Old Ocean. Of 6,000-pound test pressure design, the new unit is screwed to the intermediate casing string before drilling plugs. The drilling control hook-up is then flanged above. When oil string has been run, it may be suspended and sealed at exactly the desired point by raising off bottom a predetermined distance and applying the split packing, slip bowl and slip assemblies around the top joint and lowering in. When the lower supporting ring of the packing assembly seats on a shoulder in the casinghead, slips engage in the bowl, shear pins in the slip bowl part under loading, and give plainly audible notice that suspension and seal have been accomplished. The pins part at a point of loading at which a predetermined portion of casing weight is carried by the packing. After the pins part the rest of the load is carried by friction between the slip bowl and the wall of the head, thus keeping excessive loads off the packing, and providing a very solid support for the pipe.

This type of casinghead, which makes possible quick suspension and sealing of the casing on very short notice, also permits suspension and sealing should the pipe string become stuck. This feature is of importance when setting long strings under extremely high pressure conditions.

Drilling-in Hook-up

When the oil string has been cemented, the drilling-in and completion hook-up (as used at Old Ocean) may then be flanged directly above the casing head, or a tie-down flange may be used over the slips and the hook-up flanged directly to the casing just set. The first of these devices was used on Bernard River Land & Development Co. No. 3, where a 10,004-foot combination string of 7-inch O.D. casing was successfully landed. The string consisted of approximately 5,000 feet of 28-pound external and internal flush double-step-joint casing on bottom, with the upper half of the string made up of 26-pound external upset double-step-joint casing. It may be mentioned that the practice of suspending and sealing intermediate and oil casing strings through drilling control hook-ups flanged above special casingheads is increasing rapidly. Obviously the practice eliminates the necessity of placing entire dependence on the cementing job to hold bottom pressures, thus forestalling one additional chance for trouble to enter the picture.

Since wells in the Old Ocean field consistently record higher and higher completion pressures as deeper sands are penetrated, this area has become the proving ground for numerous ingenious devices conceived and developed under the urge of necessity to provide control at every step. One of the points at which protection has heretofore been lacking is the top of the drill-pipe, when it is suspended on the slips in the rotary while a wire-line core barrel is being pulled from the drill-pipe.

To provide full and positive control at this point, with wire line in the drill-pipe, a simple but entirely new wire-line blowout preventer was developed for Harrison & Abercrombie. Two 3-inch

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I.D. single screw flat-ram type preventers are made integral, with the single control wheel of each placed opposite the other. The lower preventer is fitted with concave rams to close on five-eighths inch wire line, and the upper preventer is fitted with blind rams to effect a complete shut-off. On test, while closed on the five-eighths inch wire line, and using drilling mud as a test fluid, the lower unit easily held 3,000 pounds pressure. In event of necessity, the line can be cut and dropped, and upper preventer with blind rams closed to shut in the drill-pipe. A 2-inch connection is provided below the rams of the lower unit to permit circulating with rams closed around the wire line.

The unit is designed for a test pressure of 6,000 pounds, in accordance with the test rating of other control fittings. Its use provides security against accidental swabbing-in of the well through the drill-pipe when removing the wire-line core barrel.

For drilling-in and completion of deep wells, after the high-pressure sands have been cored, it is unquestionably sound practice to use 6,000-pound test control hook-ups of a size closely corresponding to the diameter of the oil string. Normally this is 7-inch O.D. Two such hook-ups are illustrated by Figures 3 and 4.

Figure 3 shows a 7-inch, 5,000-pound test hook-up now in service on an 8,750-foot well drilling near Houston in a very high-pressure area. It consists of a 7-inch conventional type master-gate valve; a 7-inch hydraulically operated ram-type preventer flanged above; an adapter spool; and a combination automatic and hydraulically operated pack-off type of preventer, a new development recently placed on the market. The primary purpose of this unit is to absorb on its quick-change pack-off rubber the wear occasioned by rotation and spudding of the drill-pipe should this be necessary while holding the annular space sealed. This preventer may be closed by hydraulic pressure, and is also designed to seal off the annular space automatically. Automatic seal-off is made possible by a simple mechanism actuated by well pressure.

Fig. 3—Control hook-up in service on a 8,750-foot well drilled in a high-pressure area near Houston, Tex.

The hook-up illustrated in Figure 4 is the standard unit used at Old Ocean by Harrison & Abercrombie. It provides not only for full control while drilling in with 3½-inch O.D. drill-pipe and while setting liner and screen with the drill-pipe, but also makes provision for complete control while running, suspending and sealing tubing. The hook-up consists of a 7-inch manually operated ram-type preventer flanged to the oil string, a 7-inch conventonal type master-gate valve flanged above, and a 7-inch hydraulically operated ram-type preventer flanged above the gate valve. The upper preventer is fitted with drill-pipe rams, and the lower preventer is fitted with rams to close on the tubing string.

While drill-pipe is in the hole, blow-out protection is provided by the upper preventer. When pipe is out of the hole, the master gate may be closed to shut in the well. Before tubing is started in the hole, rams to close on tubing are installed in the upper preventer, and thus both preventers may be used to seal the annular space in the event of trouble. When tubing is bottomed, it is im-

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* The Oil and Gas Journal, June 10, 1937, Page 58.
* National Petroleum News, June 9, 1937, Page 54.

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Fig. 4—Standard control unit used in the Old Ocean field, providing for control while running, suspending and sealing tubing

mediately suspended and sealed on the rams of the lower preventer. The top gate-valve is then closed and the upper preventer removed. The christmas-tree is then flanged directly to the master gate-valve, and the well washed in. This completion method, while involving a reasonably heavy investment in permanent fittings left on the well, provides maximum control at every step of drilling in and completing. Also, since it minimizes the hazard to the heavy drilling rig and costly well bore, it is considered a sound investment.

On more than one occasion, in completing the last two wells at Old Ocean, both producing from below 10,000 feet, the control hook-up was brought into play to hold down kicking pressures. The extremely heavy construction of all units, and the knowledge that they have been carefully tested to 6,000 pounds, gives the drilling crews a feeling of complete command at all times. This factor greatly strengthens what has aptly been termed the one weak link in high-pressure well completion work—the factor of safety of the human element.

In the field of christmas-tree design and construction, many new and valuable developments have been perfected in the past year, details of which rightly belong to another article. Suffice it to say that methods and practices have been worked out which permit complete and positive control at every step of the procedure, with pipe in or out of the hole. Numerous recorded blowouts, and instances of loss of control of almost completed wells, attest to the need of these new improvements.

One of the most interesting and unique proposals now afoot has its origin in the necessity for a quickly available source of high-pressure mud for killing completed wells or controlling drilling wells should fittings cut out, or other exigencies make this course compulsory. As indicated by Figure 5, the plan is to install a central mud-mixing and high-pressure circulating system in the Old Ocean field. The nucleus of the system will be a special 15-inch by 4¼-inch by 18-inch slush pump. The pump will circulate synthetic mud mixtures to any part of the field at approximately 6,000 pounds pressure; having a displacement of 100 bbls. an hour at 40 strokes per minute. Other units of the system are indicated in Figure 5, and include 200-pound working pressure steam boilers, boiler feed pump, water pit, pickup and mixing pump, mud mixing equipment, mud pit, mud storage warehouse, necessary connecting lines and a manifold ready for quick connection to any well in the field. Completed wells are now being equipped with hydraulic lines leading out 50 feet from the christmas-trees, so that in event of need a hydraulic line from the central high-pressure circulating system may be laid quickly and tied in to the well.

The soundness of this plan is clearly demonstrated by an incident which occurred recently in a high-pressure wildcat completed near Galveston. For reasons unknown the well began making considerable sand and before the lease men were aware of the seriousness of the situation one of the fittings on a tubing flow-wing, located behind the control valve, cut out. By that time all of the control valves had been so seriously sand-cut that the well pressure could not be held. In less than an hour the well was loose, and involved a hazardous and costly capping job. Had it been possible to pump heavy mud into this well as soon as the danger of the situation was discovered, the loss of control would have been avoided.

In another instance, a well being drilled in a high-pressure area near Houston, Tex., lost all circulating fluid in a cavity. Immediately, sufficient pressure built up on the drilling-string to blow off the rotary hose at the standpipe, and the well was loose. Later, the hose fortunately tangled in the derrick girt, and it became possible for the crew to break out and set the kelly-joint in the rat hole. The safety joint was then stabbed, and the well shut in. A 5,000-pound pressure gauge installed on the safety joint bumped the pin and broke the gauge. Triple compounded pumps could not overbalance the well pressure when an attempt was made to kill the well through the drill-pipe. Here was a clear demonstration of the future need for a central high-pressure mud-circulating system, with capacity to overcome the highest pressures.

In summarizing, it should be noted that the way has been cleared for manufacture of control equipment of 10,000-pound test-pressure design. Such equipment may be hydraulically operated, and presupposes the provision at the rig of sources of hydraulic pressure approximating 5,000 pounds per square inch for control-unit operation. All parts of a high test hook-up, including manifold valves capable of handling mud working pressures of 5,000 to 6,000 pounds per square inch, are in various stages of development. It may again be stated that a great gap exists between a shop test of, say, 10,000 pounds per square inch cold-water pressure under static conditions and actual field operation; including opening and closing, and in the case of blowout preventers, rotating and raising and lowering the drill-pipe under pressures of 5,000 pounds, using mud as a medium of pressure.

Valve Arrangement for Blending Gasoline

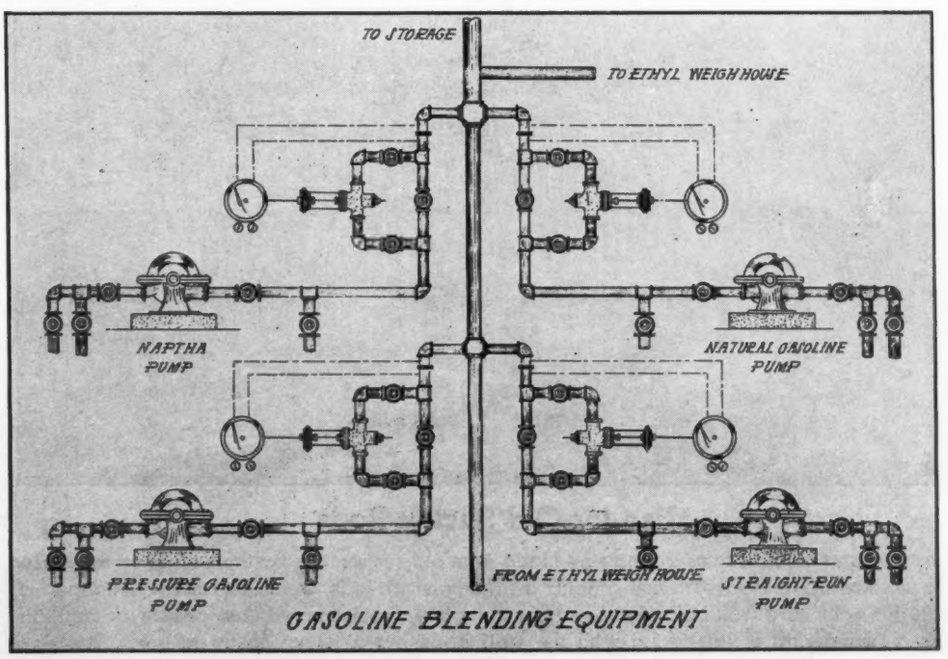
Gasoline stocks are moved so many times and circulated so much in the blending of the finished product that the loss of time and the loss due to evaporation often seems prohibitive.

However, much time can be saved and evaporation loss eliminated by blending all stocks and leading at the same time.

The blend is determined in the laboratory by testing the samples, also the lead requirement is determined in the laboratory. After this procedure has been completed, the operator sets his control instruments according to the percentages determined in the laboratory and starts the blending of the four separate stocks, and together with this a portion of the blended stocks is circulated through the ethyl weigh house where the correct amount of lead is blended with the gasoline.

The stream sample is taken at various intervals and checked for gravity by the operator to make sure the blend is being made in the proper manner. Of course, the pumps are to have manifolds so that they may be used for purposes other than just blending, and if more than four stocks are to be in the blend—extra pumps must be provided.

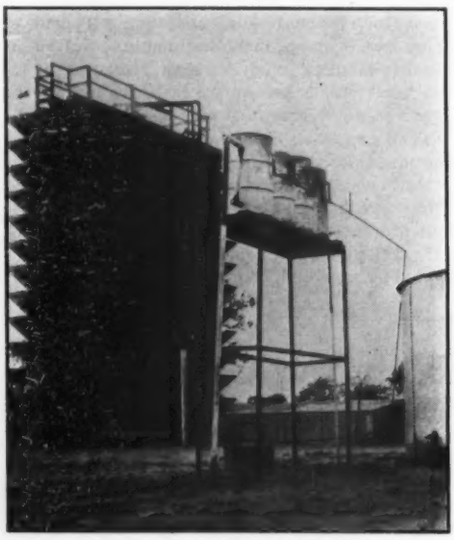
If it is not practical to lead as the blend is being made, one of the heavier stocks may be leaded prior to the blending operation, without loss due to evaporation.



OPERATING IDEAS

Oil Skimmer

Seal oil used in a gasoline plant is removed from the cooling water by elevating four oil drums high enough to secure gravity flow into an 8-foot tank. The oil and water enter the first drum and accumulate about one-third oil and two-thirds water, the oil being skimmed from the top of the water. On the second drum about 3 inches of oil will accumulate above the water and on the third



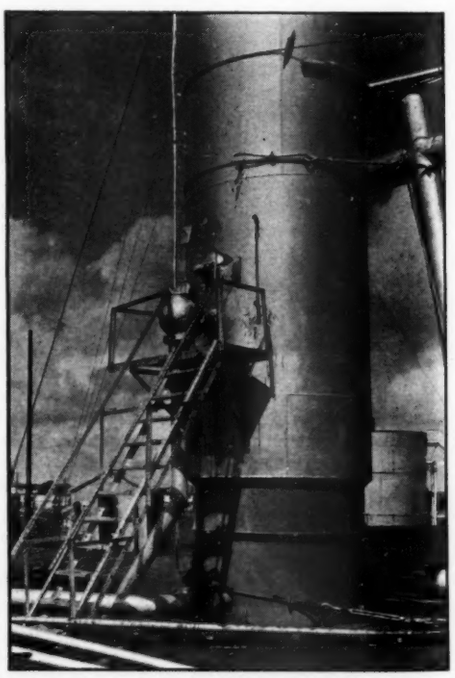
drum only about 2 inches of oil while there is just a thin film on the fourth drum when the skimmer is operating properly. The oil from each drum flows into a pipe line and through a swedged nipple into the bottom of the bolted tank. One essential of this system is the riser on the horizontal pipe between drums and tank to break the fluid seal in the pipe line. The water flows from one drum to another and is discharged from a connection in the side of the drum near the bottom.

Treating Sixteen Wells With One Lubricator

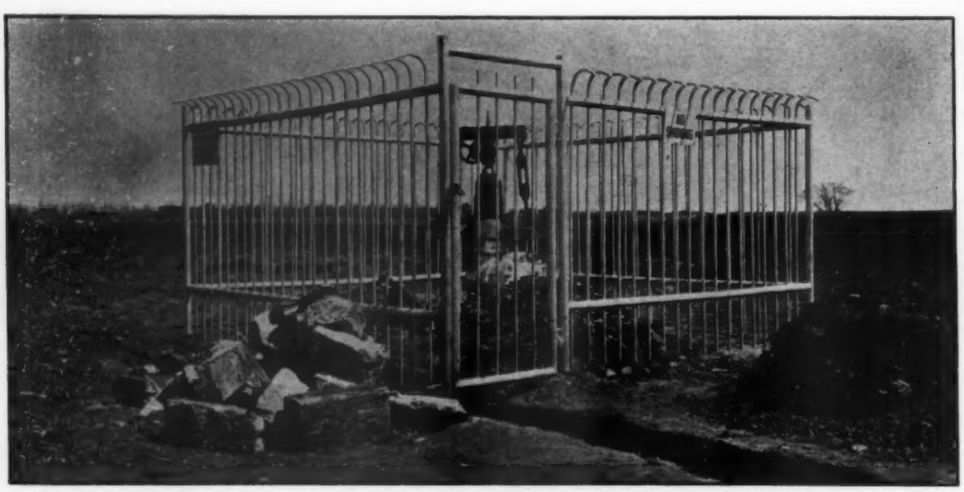
An oil company operating in the Olympic pool, near Wewoka, Okla., has sixteen wells pumping through one treater, the lines leading to the treater being shown in the accompanying photograph. Between the treater and storage tanks is a 4-inch flow line in which oil from the treater gravitates to the tanks. The lubricator is operated by the flow of oil through a rotary pump installed in the flow line, sufficient pressure on the pump being assured by having the treater mounted on a 12-foot stand which gives it sufficient hydrostatic head.

Elevated Separator Platform

Many operators prefer some elevation for their oil and gas separators to allow a free flow of fluid to their tankage without the use of pressure. This practice acts to place the regulating equipment of the separator out of



reach of the switcher, thus many operators use improvised ladders to reach the valves frequently requiring adjustment. As is shown here, one company in the Oklahoma City field is using a specially designed stand made from material used in making stairs and runways for steel tanks for this purpose, enabling the switcher to reach the valves safely and quickly.



Use for Old Sucker-Rods

An artistic and useful enclosure may be made from old sucker-rods by the welder on the lease. Here is shown a protective fence around a high-pressure gas well. The sturdy manner in which this enclosure was built insures rather complete protection against people or animals tampering or interfering with the well head but it is not costly to erect.

Evaluating Alloy Steel Tubes for Cracking Still Service

By W. L. NELSON

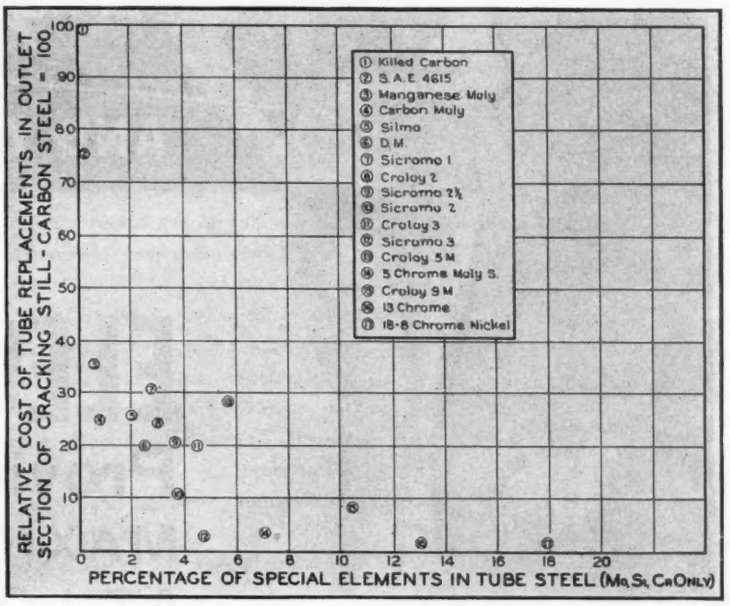
Some refiners have been hesitant about adopting alloy steels for cracking still service because of the extra first cost of such steels. Nevertheless, all of the standard tube materials that are now offered by steel manufacturers are cheaper than carbon steels. They last much longer than carbon steel for even the normal condition in which no corrosion, except oxidation or scaling, occurs and for those extreme cases in which the oil is corrosive the use of alloy tubes is even more advantageous. However, neutralizing chemicals can be utilized to combat internal or oil corrosion and hence we have only two major factors to consider in evaluating the usefulness or value of a tube steel—namely, resistance to oxidation at high temperatures and strength at elevated temperatures. In general, the tube steels now offered by steel manufacturers are all aimed at superior properties in these two respects although certain of the high chrome steels are also useful in combating sulfur corrosion.

Three alloy elements, chromium, molybdenum and silicon have been found to be most useful in attaining scaling resistance and high temperature strength. Of these elements, molybdenum is detrimental to the scaling resistance but its great value in increasing the creep strength far outweighs its tendency to increase scaling.

Scaling at High Temperatures

The rate at which steels will oxidize or scale at high temperatures has been studied by many investigators. Although the agreement of the results of various investigators is by no means perfect, the results are consistent enough to warrant the adoption of average rates of oxidation as presented in Table 1. In some cases only one reference was available concerning the scaling rate and the author suggests that the reliability of these data be judged by referring to the references which are given at the end of the paper. The author also wishes to point out that the experimental methods used by different authorities are not always comparable and hence the results cannot be used to compare two steels that are nearly alike. Table 1 also shows the average costs and design strengths that were used throughout the discussions that follow.

The column in Table 1 labeled as "Relative Penetration" shows the rate of oxidation as compared with carbon steel. Thus, carbon moly steel (No. 2) rusts or oxidizes faster than carbon steel, namely at a rate that is 13 per cent faster than carbon steel, whereas 13 per cent chromium steel (No. 16) rusts only 1 per cent as fast as carbon steel. The figures do not indicate actual life of service, merely relative rates compared with carbon steel.


RELATIVE COST OF TUBE REPLACEMENTS IN OUTLET SECTION OF CRACKING STILL - CARBON STEEL = 100
PERCENTAGE OF SPECIAL ELEMENTS IN TUBE STEEL (Mo, Si, Cr ONLY)
① Killed Carbon
② S.A.E. 4615
③ Manganese Moly
④ Carbon Moly
⑤ Silmo
⑥ D.M.
⑦ Sicromo 1
⑧ Croloy 2
⑨ Sicromo 2½
⑩ Sicromo 2
⑪ Croloy 3
⑫ Sicromo 3
⑬ Croloy 5 M
⑭ 5 Chrome Moly Si.
⑮ Croloy 9 M
⑯ 13 Chrome
⑰ 18-8 Chrome Nickel

Effect of alloy elements on cost of maintaining tubes in a cracking still

Many ways of comparing the value or life of the various steels are available but the most logical method is to compare tubes of the same thickness. The stronger steels can suffer a large amount of scaling before they become too thin for service and likewise the oxidation resistant steels will rust more slowly and hence can be used for a long time before they become too weak. Accordingly, Table 2 is a comparison of the length of life, cost, and relative value of the 17 steels for the following cracking-still conditions:

Diameter of tube	2 inches inside
Thickness	⅜ inch
Pressure	1,000 lb. per sq. in
Temperature in tube wall	1,000° F.

The cost of a foot of tubing is shown in column 3 of the table. Column 4 shows the thickness of material required to provide adequate strength and the remaining part of the ⅜-inch of thickness (figures in column 5) is available for scaling or corrosion. Note that only .045 inch of the carbon steel is available for corrosion whereas .284 inch of the carbon moly steel may be lost by scaling before the tube becomes dangerously weak. Under these conditions, the relative length of life of each of the steels compared to carbon steel is given in column 6. Thus if a carbon steel will last for one month in a particular set of still conditions, one might expect that carbon moly steel would last over 5.5 months and that 5 chrome moly silicon steel (No. 14)

TABLE 1—RELATIVE SCALING TENDENCY, COST, AND STRENGTH OF TUBING STEELS

No. of steel	Name of steel	Approx. composition Mo.	Cr.	Si.	Others	Relative penetration by scaling (carbon as 1)	Design strength	Cost, cents per pound	References
1	Killed Carbon	0	0	.2	..	1.00	4,000	5.1	
2	Carbon Moly	.5	0	.3	..	1.13	12,000	7.1	1, 3, 7, 8, 9
3	Silmo	.5	0	1.5	..	0.73	6,400	7.7	1
4	Manganese Moly	.3	0	.3	1.3	1.35	7,600	*6.7	8
5	Sicromo 1	.5	1.0	1.25	..	0.84	8,000	9.6	1
6	D M	.5	1.25	.75	..	0.77	18,000	9.5	1, 7, 8, 9
7	SAE 4615	.25	0	..	2 Ni	1.20	4,800	8.0	8
8	Croloy 2	.5	2.0	.5 Max	..	0.70	9,300	10.2	10, 11
9	Sicromo 2	.5	2.0	1.25	..	0.29	9,000	10.6	1
10	Sicromo 2½	.5	2.5	.75	..	0.55	*9,500	11.1	1
11	Sicromo 3	.5	3.0	1.25	..	0.08	11,000	11.9	1
12	Croloy 3	1.0	3.0	.5 Max	..	0.46	*9,000	12.3	11
13	4-6 Chrome Moly	.5	5.0	.2	..	0.48	8,000	16.0	1, 2, 3, 7, 8, 9, 10, 11
14	4-6 Chrome Moly Silicon	.5	5.0	1.5	..	0.06	12,000	17.6	1
15	Croloy 9	1.5	9.0	...	..	0.06	9,000	40.0	10
16	13 Chrome	0	13.0	...	..	0.01	*11,000	*46.0	2, 10
17	18-8 Chrome Nickel	0	18.0	...	8.0	0.01	17,000	54.0	1, 2, 9, 10

*Estimated.

TABLE 2—RELATIVE LIFE AND COST OF MAINTAINING TUBES

No.	Name of steel	Cost, cents per foot	Thickness-Inches Necessary For strength	Available for scaling	Relative length of service	Relative cost of unit time of service
1	2	3	4	5	6	7
1	Killed Carbon	48 5	0 33	.045	1 00	100
2	Carbon Moly	67.5	091	.284	5 57	25
3	Silmo	73.3	.185	.190	5.79	26 2
4	Manganese Moly	63 8	.151	.224	3.68	35 7
5	Sicromo 1	91.4	.143	.232	6.13	30 8
6	D M	90 5	.059	.316	9.12	20 4
7	SAE 4615	76 2	.263	.112	2.07	76 0
8	Croloy 2	97 0	.120	.255	8.1	24 8
9	Sicromo 2	101 0	.125	.250	19.1	10 9
10	Sicromo 2½	105 6	.118	.257	10.4	20 8
11	Sicromo 3	113 2	.100	.275	76.5	3 1
12	Croloy 3	117.0	.125	.250	12.0	20 1
13	4-6 Chrome Moly	152.3	.143	.232	10.7	29 1
14	4-6 Chrome Moly Si	167.5	.091	.284	105.2	3 3
15	Croloy 9	382 0	.125	.250	92.5	8 5
16	13 Chrome	439 0	.100	.275	611.0	1 5
17	18-8	514.0	.062	.313	695 0	1 5

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would last for 105 months or about nine years. It is interesting to note that although carbon moly steel scales more rapidly than carbon steel, it is so strong that six times as much metal can be lost by rusting as that lost by the carbon steel before the carbon moly must be taken from service. Thus, the carbon moly steel, because of its strength and in spite of its poor resistance properties, will last much longer than carbon steel.

Relative Costs of Materials

The final column (No. 7) in Table 2 shows the relative cost of using the several tube materials. For example if the cost of maintaining carbon tubes in a still is $100.00 per month, the cost of maintaining Silmo tubes in the still for the same length of time is only $26.00 and for Croloy 3 tubes, only $20.00. In addition to this saving which is based only on the cost of the tubes, the carbon tubes would involve additional costs for frequent shutdowns and replacement.

The author is aware that different comparisons may be made but regardless of the manner of comparison, essentially the same relative value of tubing materials will be apparent providing the method is a legitimate one which is a true picture of modern processing methods. As an example, if tubes having a thickness of ½-inch rather than ⅜-inch had been compared, the comparison would have been even more favorable to the alloy materials. Likewise, a tube thickness if ⅝-inch as a means of comparison would have been more favorable to all of the alloy steels with the exception of those which oxidize more rapidly than carbon steel, namely carbon moly, maganese moly, and SAE 4615.

Finally it should be again called to the readers attention that the above comparison is based only on oxidation and strength. However, most of the above steels are also more resistant to sulfide corrosion than carbon steel and hence under sulfide corrosion conditions they will be even more valuable than the above study indicates.

Sulfur Corrosion

Although the resistance of tube materials to oil or sulfur corrosion has not been as completely studied as the oxidation resistance, some general comparisons are given in Table 3. Although these data are not altogether dependable because of the vast differences in corrosive actions, they will serve to indicate the general saving that may be expected and they will be used in the following cost analyses.

TABLE 3—APPROXIMATE RESISTANCE OF TUBE MATERIALS TO SULFUR CORROSION

Steel	Relative penetration (carbon as 1 0)	References
Carbon	1 0	...
Carbon Moly	0 61	9
Manganese Moly	0 48	9
1 Chrome	0 58	5, 6
D M	0 62	9
2 Chrome	0 47	5, 6
4 Chrome	0 36	5, 6
5 Chrome	0 33	5, 6
6 Chrome	0 29	5, 6
9 Chrome	0 23	5
13 Chrome	0 18	5

Chromium steel containing 13 per cent of chromium oxidizes or scales at only one per cent of the rate of carbon steel (Table 1) and sulfur corrosion proceeds at only 18 per cent of the rate of action on carbon steel (Table 3). Although this alloy costs nine times as much as carbon steel it will last 340 times as long when a tube thickness of three-eighths inch is used. In terms of cost of tube replacements etc., the 13 chrome steel will cost only about 3 per cent as much as carbon steel tubes. A similar comparison of DM steel used under both oxidation and sulfur corrosion conditions show that the DM tubes will last almost 13 times as long as carbon steel and that the cost of service is only 15 per cent of the cost of service when using carbon steel tubes.

The general conditions are the same as mentioned heretofore, or cracking-still conditions, and it was assumed that oxidation and sulfur corrosion were equally active. Obviously all sorts of conditions will be encountered in practice, ranging from no sulfur corrosion to the extreme case where sulfur corrosion is so rapid that oxidation is relatively unimportant. However, the comparison under these other conditions will be of the same magnitude as the above.

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The costs and analyses were obtained directly from tube manufacturers.

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Croloy 18
Croloy 18-8
Croloy 25-20*
Croloy 27

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Detroit, Mich.	Ford Building
Houston, Texas	Electric Building
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Comparison of Octane Ratings Made by Army and C.F.R.

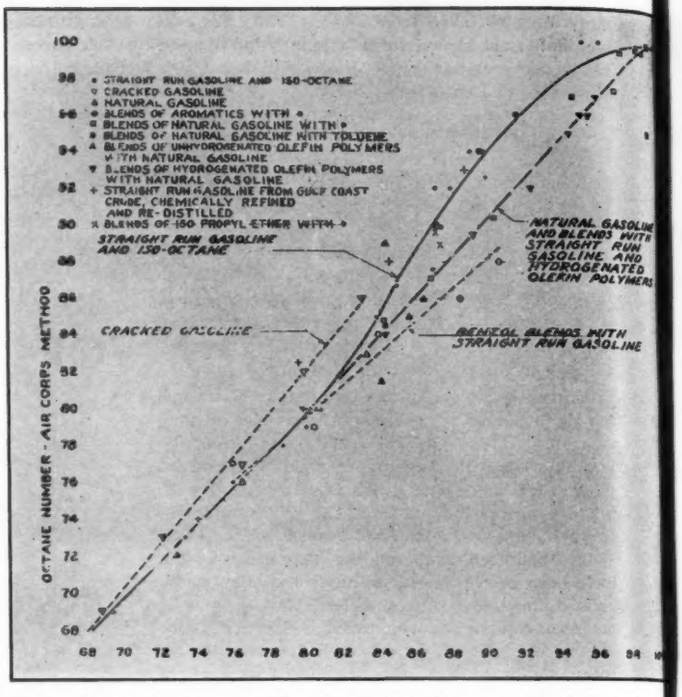
A comparison of octane ratings by Air Corps method and the C.F.R. motor method for various types of fuels has been made by Captain F. D. Klein and R. V. Kerley, assistant mechanical engineer, material division, U. S. Army Air Corps, the results of which are shown in the accompanying table and graph. Various laboratories supplied the fuel and the octane ratings by the C.F.R. motor method for these fuels.

In discussing the results the authors stated: "It should be noted that up to 80-octane number all fuels rate approximately equal by both methods of knock testing. However, cracked gasoline diverges from the general curve, rating considerably higher by the Air Corps method of test. The straightrun gasoline which apparently follows the same straight line as the cracked gasoline is considerably off the normal straightrun gasoline curve and was therefore indicated by the crosses instead of by the dots used for straightrun gasoline and iso-octane. No attempt is made to explain this divergence.

"Fuels No. 10 and 22 were rated some time ago and the results obtained were disregarded in plotting the curve for straightrun gasoline and iso-octane, since more recent results (ratings of fuels No. 21 and 23) indicate that the previous ratings by the C.F.R. motor method might be in error. Laboratories using the C.F.R. motor method have reported that fuels of approximately 100-octane number are difficult to rate correctly by that method.

"Depreciation of the anti-knock ratings of benzol blends is inherent in Air Corps method."

For permission to publish the curves and accompanying data acknowledgement is made to C. B. Veal from whose paper, "Rating Aviation Fuels in Full-Scale Aircraft Engines" (S.A.E. Journal, May, 1936), considerable data were obtained, to the Standard Oil Co. of California, to the Ethyl Gasoline Corp., to the Standard Oil Development Co., and to the Atlantic Refining Co.



Comparison of octane ratings by the Air Corps method and the C.F.R. motor method for various types of fuels

Fuel No.	C.F.R. Motor Method Octane No.	Air Corps Method Octane No.	PbEt, Ml. per gallon	Fuel Description—
1	73 0	72 0	None	Straightrun gasoline
2	80 0	80 0	Yes*	Straightrun gasoline
3	87 0	92 0	Yes*	Straightrun gasoline
4	73 4	73 0	None	Straightrun gasoline
5	76 0	76 0	0 2	Straightrun gasoline
6	80 0	79 0	0 6	Straightrun gasoline
7	83 8	85 0	1 5	Straightrun gasoline
8	87 8	92 0	3 0	Straightrun gasoline
9	89 6	94 0	3 9	Straightrun gasoline
10	95 0	100 0	8 5	Straightrun gasoline
11	75 5	75 0	None	Straightrun gasoline
12	84 9	86 7	1 0	Straightrun gasoline
13	87 3	89 9	2 0	Straightrun gasoline
14	89 7	92 6	3 0	Straightrun gasoline
15	88 9	94 0	3 0	Straightrun gasoline
16	78 7	78 0	None	Straightrun gasoline
17	*74 1	74 0	None	Straightrun gasoline
18	79 6	82 5	1 0	Straightrun gasoline
19	84 5	88 0	3 0	Straightrun gasoline
20	88 6	93 0	5 0	Straightrun gasoline
21	99 3	100 0	None	Technical iso-octane
22	96 0	100 0	3 0	50 per cent straightrun gasoline plus 50 per cent iso-octane (crude)
23	100 0	100 0	6 0	50 per cent straightrun gasoline plus 50 per cent iso-octane (crude)
24	76 0	77 0	None	79 per cent straightrun gasoline plus 21 per cent benzol
25	80 4	79 0	None	50 per cent straightrun gasoline plus 50 per cent benzol
26	83 9	84 0	None	33 per cent straightrun gasoline plus 67 per cent benzol
27	88 4	86 0	None	24 per cent straightrun gasoline plus 76 per cent benzol
28	90 5	88 0	None	21 per cent straightrun gasoline plus 79 per cent benzol
29	68 8	69 0	None	Cracked gasoline
30	72 2	73 0	0 3	Cracked gasoline
31	76 5	77 0	1 0	Cracked gasoline
32	79 9	82 0	2 9	Cracked gasoline
33	83 0	86 0	6 0	Cracked gasoline
34	79 9	80 0	None	73 per cent hydrogenated olefin polymers plus 27 per cent pentanes
35	92 2	92 0	1 0	73 per cent hydrogenated olefin polymers plus 27 per cent pentanes
36	95 8	97 0	3 0	73 per cent hydrogenated olefin polymers plus 27 per cent pentanes
37	89 1	89 5	None	73 per cent hydrogenated olefin polymers plus 27 per cent pentanes
38	94 9	96 0	0 5	73 per cent hydrogenated olefin polymers plus 27 per cent pentanes
39	84 3	84 0	None	60 per cent hydrogenated olefin polymers plus 40 per cent rectified casinghead
40	94 3	95 0	1 0	60 per cent hydrogenated olefin polymers plus 40 per cent rectified casinghead
41	95 4	96 0	None	82 per cent hydrogenated olefin polymers plus 18 per cent iso-pentane
42	84 1	81 5	None	73 per cent unhydrogenated olefin polymers plus 27 per cent pentanes plus .015 per cent o-cresol
43	85 6	85 0	1 0	73 per cent unhydrogenated olefin polymers plus 27 per cent pentanes plus .015 per cent o-cresol
44	86 4	86 0	3 0	73 per cent unhydrogenated olefin polymers plus 27 per cent pentanes plus .015 per cent o-cresol
45	98 4	99 9	3 0	36.6 per cent straightrun gasoline plus 44.4 per cent iso-octane plus 19 per cent rectified casingh'd
46	84 2	84 8	None	36.6 per cent straightrun gasoline plus 44.4 per cent iso-octane plus 19 per cent rectified casingh'd
47	86 8	87 1	None	20.0 per cent straightrun gasoline plus 56.0 per cent iso-octane plus 24 per cent rectified casingh'd
48	97 3	99 5	1 7	20.0 per cent straightrun gasoline plus 56.0 per cent iso-octane plus 24 per cent rectified casingh'd
49	90 2	90 4	None	71 per cent iso-octane plus 29 per cent rectified casinghead
50	98 4	99 7	0 75	71 per cent iso-octane plus 29 per cent rectified casinghead
51	98 8	99 6	Yes*	Approx. 45 per cent iso-octane plus 45 per cent straightrun gasoline plus 10 per cent iso-pentane
52	99 3	100 0	Yes*	Approx. 45 per cent iso-octane plus 45 per cent straightrun gasoline plus 10 per cent iso-pentane
53	96 9	97 4	None	85 per cent iso-octane plus 15 per cent iso-pentane
54	69 4	69 0	0 14	Natural gasoline
55	72 9	72 0	0 39	Natural gasoline
56	76 5	76 0	0 80	Natural gasoline
57	80 7	80 0	1 75	Natural gasoline
58	83 3	83 0	2 75	Natural gasoline
59	84 3	89 0	4 10	Natural gasoline
60	87 1	90 0	5 40	Natural gasoline
61	84 3	85 0	None	45 per cent rectified casinghead plus 55 per cent commercial toluene
62	89 4	94 0	1 0	45 per cent rectified casinghead plus 55 per cent commercial toluene
63	91 4	96 0	2 0	45 per cent rectified casinghead plus 55 per cent commercial toluene
65	99 3	95 2	None	13.8 per cent rectified casinghead plus 86.2 per cent toluene
64	94 5	97 0	3 0	45 per cent rectified casinghead plus 55 per cent commercial toluene
66	86 9	87 6	1 0	75 per cent straightrun gasoline plus 25 per cent iso-octane
67	80 2	80 0	None	82 per cent straightrun gasoline plus 18 per cent iso-propyl-ether
68	87 3	88 9	None	56 per cent straightrun gasoline plus 44 per cent iso-propyl-ether
69	87 0	89 6	1 0	85 per cent straightrun gasoline plus 15 per cent iso-propyl-ether

*Exact quantity of tetraethyl lead not known.

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

A.S.T.M. Specifications for Three Grades of Motor Gasoline

Can you furnish details of "A.S.T.M. Specifications for Gasolines"?—R. Y.

The American Society for Testing Materials has prepared tentative specifications covering three types of motor gasoline. Provision is made to meet requirements of seasonal changes at point of delivery by stipulating different vapor pressures and 10 per cent distillation points for winter, fall and spring.

The three types are outlined:

A.S.T.M. GASOLINES

Distillation, °F. Evaporated, % max.		Type A	Type B	Type C
10	W	140	140	
	F	149	149	167
	S	158	158	
50		284	257	284
90		392	356	392
Octane No. min.		67 or 75	67 or 75	45
Residue		2	2	2
Corrision		pass	pass	pass
Gum, max. mg./100 ml.		7	7	7

The 75 octane number grade corresponds to premium-priced gasolines. The 67 to regular-priced and 45 to less than regular-priced gasolines. No sulfur specification is included; at this time gasolines containing up to 0.25 per cent sulfur are distributed.

The testing methods are those of the A.S.T.M.

Reference: Tentative Specifications for Gasoline, A.S.T.M. Designation: D 439-37F.

Conditions Relating to Use of Liquefied Butane for Fuel

We are interested in knowing something about butane gas, extent of its use, use in furnaces, stoves, etc. Is an especially built burner required? What is its chemical analysis, safety and approximate cost?—E. I.

The U. S. Bureau of Mines reported June 2, 1936, the condition of the liquefied petroleum gas market. The information following is based on this report.

Sales, or the marketed production, of liquefied petroleum gases for domestic, gas company, and industrial uses, reached 76,855,000 gallons in 1935, or 20,428,000 gallons (36.2 per cent) more than the 1934 requirements of 56,427,000 gallons.

No information is available showing the volume of butane consumed in building furnaces and stoves. Butane having a heating value of 3,251 B.t.u. per cubic foot is well suited for dilution with air to any desired value. Most of the gas distributing systems of this type make use of butane-air mixtures.

The industrial use of liquefied petroleum gases was outstanding in 1935 when 47,894,000 gallons or 62.3 per cent of all deliveries fell under this classification, compared with 32,448,000 gallons or 57.5 per cent in 1934. The domestic use of liquefied petroleum gases increased from 17,681,000 gallons in 1934 to 21,380,000 gallons in 1935, but the ratio to total deliveries declined from 31.3 per cent in 1934 to 27.8 per cent in 1935. The quantity used in gas manufacturing increased from 6,298,000 gallons in 1934 to 7,581,000 gallons in 1935.

The American Gas Association has furnished the Bureau of Mines the following data regarding the distribution of liquefied petroleum gases:

"At the end of 1935, liquefied petroleum gas was being delivered through mains to consumers in 163 communities in 29 states by 68 companies supplying 29,516 customers.

"Butane-air gas with heating value ranging from 520 to 900 B.t.u. per cubic foot was supplied to 105 communities in 28 states by 57 companies. A mixture of undiluted butane and propane gas with a heating value of 2,800 to 3,000 B.t.u. per cubic foot was supplied to 14 communities in California and Nevada by six companies. Undiluted propane gas with a heating value of 2,550 B.t.u. per cubic foot was supplied to 44 communities in Maryland, Minnesota, New Jersey, North Dakota and Wisconsin by five companies."

Butane is used principally as an industrial fuel, 27,689,000 gallons out of total deliveries of 34,084,000 gallons, being consumed in 1935 compared with 19,443,000 gallons in 1934 out of a total of 25,553,000 gallons. Sales of butane to gas manufacturing plants declined from 5,064,000 gallons in 1934 to 5,042,000 gallons in 1935, but deliveries for domestic purposes in 1935, although small in volume, registered a 30 per cent gain over 1934.

Stoves are especially built for use with liquefied gases. The composition of either propane or butane is the practically pure hydrocarbon. Butane should be handled with the same care as observed with any gas as mixtures with air are explosive. The addition of an odorant is advised. The cost varies with location and may be obtained from the oil companies now distributing this gas.

Reference: U. S. Bureau of Mines, Mineral Market Reports, No. M. M. S. 457, June 2, 1936.

Questions on Petroleum Technology may be sent to Dr. Charles K. Francis, The Oil and Gas Journal, Tulsa, Okla. When a copy of the answer is desired postage should be enclosed.

CHEMICALS FOR THE PETROLEUM INDUSTRY

Calcium Chloride, Flake

Use — Dehydrating oils, dust-proofing, refrigerating brine, solution for fire buckets, sprinkler systems, water purification. Very deliquescent.

Form—Flakes. Also obtainable as powder, solid, anhydrous and solution.

Formula—$CaCl_2$ (anhydrous), or $CaCl_2 . (H_2O)_6$.

Specific gravity—2.15.

Melting point—1425° F.

Soluble—Cold water 59.5 per cent; boiling water 154 per cent.

LIMITATIONS

	Per cent
Calcium chloride, min.	77.0
Salt (NaCl), max.	1.5
Calcium hydroxide, max.	0.15
Calcium carbonate, max.	0.05

Hydrogen Sulfide May Be Reduced to Sulfur When Air Is Limited

Will you kindly inform me if it is feasible to obtain solid sulfur by burning hydrogen sulfide with a limited volume of air? Under what conditions, if any, would oxygen unite preferentially with the hydrogen rather than with the sulfur?—W. D. W.

Hydrogen sulfide is inflammable in air, burning with a blue flame, the products of combustion being sulfur dioxide and water, according to—

$$H_2S + 3\,O_2 \rightarrow 2\,SO_2 + 2\,H_2O.$$

This means that the gas is supplied with the requirement of oxygen. However, if the oxygen supply is reduced so that there is not sufficient to complete the reaction, the result is shown by—

$$2\,H_2S + O_2 \rightarrow 2\,H_2O + 2\,S.$$

The sulfur is deposited as a fine film but under some conditions masses of crystals are produced. The vapor lines of refineries running high sulfur oils often contain such deposits.

The reaction to cause the deposition of sulfur from hydrogen sulfide is accelerated by certain catalysts, one well known is the colloidal nickel sulfide, made by the addition of nickel to a saturated sulfur solution.

It is reported that hydrogen sulfide will yield 85 per cent of its sulfur content in the form of precipitated sulfur by this method. The sulfur is caused to collect on the surface of the liquid, from which it is obtained by mechanical means. This material is sent to a filter press for the removal of water. When necessary the product is purified by washing with water and then dried.

Another method is to burn a part of the hydrogen sulfide to sulfur dioxide and then have this react on the hydrogen sulfide. This is explained—

$$2\,H_2S + SO_2 \rightarrow 3\,S + 2\,H_2O.$$

The control, of course, in this scheme is the adjustment of the air supply.

This form of sulfur is much desired for the preparation of emulsions and agricultural sprays.

Analysis of Oil Produced in Putnam Field, Texas

Kindly give a statement showing the products derived from the oil produced in the Putnam field of Callahan County, Texas.—R. L. H.

ANALYSIS OF CRUDE OIL FROM PUTNAM FIELD, CALLAHAN COUNTY, TEXAS

Depth, feet	260-278
Color	Bt. green
Gravity, A.P.I.	31 9
Sulfur, per cent	0 3
Viscosity at 100° F.	63
Pourpoint, degrees F.	15
Gasoline, gravity 55.9, per cent	16 3
Kerosene, gravity 42.3, per cent	4 7
Gas oil, gravity 35.6, per cent	24 4
Non-vis. lube. dist., gravity 32.1-28, per cent	13 2
Mdm. lube. dist., gravity 28-25.9	9 4
Residue, gravity 19.0, per cent	31 3

Reference: U. S. Bureau of Mines, R. I. 3252, Tabulated Analyses of Texas Crude Oils, by Gustav Wade.

PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Additional Oil Recovered by Secondary Methods

I have noticed reports in The Oil and Gas Journal that repressuring of the deep sands in the Salt Creek field, Wyoming, is contemplated. I have also noted several references to the very beneficial results obtained in other pools where the sands have been repressured and it was expected that the field would produce as much oil as it had in the past. This statement seems so extravagant and if correct would mean so much to the industry that I request you to cite me to any corroborative information that has been published in The Oil and Gas Journal.—E. E. W.

For many years past there have been articles upon the results obtained by application of vacuum, repressuring with air or gas and water-flooding of old oil sands published in The Oil and Gas Journal and it is suggested you check the semiannual and annual indexes for the dates and titles of these articles. They are too numerous to tabulate here.

It is possible you have in mind statistics in which the actual results have been tabulated covering specific fields. Such statistics are not available for in very few instances has this secondary recovery work been completed and until it is completed it is impossible to make final statements.

That there has been marked increases in volume of oil recovered by these methods after standard production practice has reached its limits is very evident because of the general application of such methods to old fields.

From "Petroleum Production," by W. F. Cloud, University of Oklahoma, Norman, Okla., the following is quoted. Mr. Cloud gives the A.P.I. credit for the original data.

A SUMMARY OF COSTS AND PROFITS FOR A PARTICULAR REPRESSURED PROPERTY

	East	West
Oil wells	179	153
Pressure wells	32	17
Proved acres	1,370	1,130
Net production, bbls.	736,154.47	428,164.68
Total income	$760,828.43	$442,515.55
Total expense	296,658.91	261,483.00
Income per barrel	1.03	1.03
Expense per barrel	0.403	0.611
Total improvements	144,413.66	116,352.23
Recovery cost per barrel	0.468	0.702
Profit per barrel	0.565	0.332
Operating profit to date	416,029.60	142,128.41
Profit per well to date	1,971.70	836.05
Profit per acre to date	303.67	125.78

S. H. Cathcart estimated in 1935 that 1,050 bbls. per acre had been recovered from Pennsylvania oil fields. The future recovery by secondary methods may equal 70 per cent of the former recovery in this area, or 735 bbls. per acre.

In the Bartlesville sand pools of northeastern Oklahoma a recovery of from 2,500 to 8,000 bbls. per acre had been made when water-flooding was started. Cores of the sand showed from 10,000 to 18,000 bbls. of oil still in place. If this is averaged at 14,000 bbls. per acre and the estimated recovery will be 50 per cent then the future oil to be removed by water-flooding methods will equal 7,000 bbls. per acre, considerably more than had been recovered before secondary recovery methods were applied.

We trust these figures will give you the information you desire but it must be remembered many of the secondary recovery projects have not been completed and also that oil companies operating such properties are not inclined to give out many detailed figures upon their operations for many obvious reasons. But the fact they apply such methods repeatedly indicates they must be profitable.

Men Needed to Operate Oil Well

How many men would you consider it necessary to take care of an oil well in Oklahoma City?—A. E. F.

There is no definite answer to your question because all wells in the Oklahoma City field are not produced in the same manner. Some wells are on the beam pumping unit, some on air lift, others operated by some form of mechanical device that went into the well. And each type of production unit needed a varying number of men to operate it and take care of the well.

There is no way we can suggest by which you can arrive at any estimate of men needed to produce a well in Oklahoma City field for it has also varied with the time—that is, age of the well. Furthermore, one crew is usually required to look after a number of wells and again the facts would have to be known to arrive at conclusions.

Just to give you some idea of the complex nature of the problem you have propounded we quote the following from a report on the Oklahoma City field by engineers for the U. S. Bureau of Mines, dated January, 1937.

Production methods in 726 wells not flowing naturally out of a total of 947 wells.

Gas lift	136
Gas lift flow devices	124
Electric centrifugal pumps	54
Pneumatic heads	11
Beam pumps	400
Hydraulic submerged pump	1
	726

And we might remark that in that entire report by the Bureau of Mines engineers covering about 250 pages no mention of labor requirements is made. It is impossible to make any such statement unless the actual well and lease is known.

Formulas for Thread Lubricants

Can you give me the formula for making what is commonly known as "zinc dust grease" such as used upon tool joints, casing and pipe threads?—F. J. E.

This is not a difficult mixture to make and it is usually prepared by the driller. In rotary drilling a lubricant is used on the tool joints and is made as follows:

	Per cent
Tallow	33.4
White lead ground in oil	23.2
Graphite	2.9
Cylinder oil	40.5

Melt tallow, add white lead, mixing well. Then add oil, stirring continually. Then add graphite and mix all together.

For the zinc dust lubricant for casing threads and tool joints the following formula for 10 pounds of grease is recommended:

	Per cent	By weight
Zinc dust	46.0	4 lbs. 10 oz.
Extra heavy cup grease	27.0	2 lbs. 11 oz.
Tung spraying oil or boiled linseed oil	27.0	2 lbs. 11 oz.

These ingredients are thoroughly mixed without heating.

Origin of Water in Producing Formation

I have seen reference to connate water in oil sands and would like to know the source of this water and in what way it differs from bottom or edge water.—S. G. D.

The word "connate" means innate or inborn and as used in describing water found in an oil producing formation it refers to water occupying minute pore spaces in the sand body. "Bottom" and "edge water" also occupy space in the pores of the formation, but instead of being found in the pores in addition to the oil, these waters alone fill the pore space. In other words the producing formation is filled with water which occupies the space below or around the edge of the portion of the formation saturated with crude oil and gas.

It is probable all of these waters are of common source. They were originally rain water which found its way into the pores in the formation, or when the formation was under the ancient sea it was saturated with water and when the formations were folded and structural traps formed into which the gas and oil migrated and were trapped the bottom and edge water was excluded.

The connate water remained on in the capillary pores of the sand body and because of its greater interfacial tension, or ability to wet and cling to the grains of sand, it remained there even while and after the gas and oil were being accumulated. Connate water does not leave the fine pores in which it has accumulated easily and therefore does not accompany the gas and oil when those hydrocarbons escape to the well bore. On the other hand bottom and edge water will flow and follow the gas and oil and tend to occupy the space formerly occupied by those elements.

During the study of cores the presence of connate water was discovered and it has been found to occupy as much as 30 or 40 per cent of the pore space in some oil sands. This reduces the voids in which gas and oil can accumulate and where reserves are estimated by some volumetric method it is necessary to deduct from the total void space that portion filled with connate water to arrive at an accurate estimate of gas and crude oil in place.

This matter of connate water is somewhat involved but production engineers and laboratory men are studying the subject and gathering data concerning its occurrence and in time its characteristics will be much better understood. It may or may not interfere with the production of oil depending upon the position it occupies with relation to the space occupied with the gas and oil. If any appreciable volume of the pore space is filled with connate water and it lies in a position between the oil and the well bore it may cut off the movement of the oil. In practice this does not seem to present any real problem in an oil reservoir where there is sufficient gas and oil accumulated to make a commercial well but after the natural energy in the reservoir has been partially dissipated it is probable some of the oil is cut off from escape to the well by pockets of connate water so accumulated as to form a natural dam in the producing formation.

FIELD OPERATIONS

Summarizing the Week's Developments

With the third well added to the Schuler field in Union County, and with a test in Miller County, only 2 miles north of the northern line of wells in the Rodessa field in Louisiana, finding saturated sand at 6,084-98 feet, Arkansas is once again strongly in the limelight. The Miller County well may make Rodessa the only three-state field in the country. Three new wells averaging about 800 bbls. per well were completed in the Lisbon field, Louisiana.

TEXAS

Phillips Petroleum Co. has a 2,265-bbl. well on the Waggoner ranch in Wilbarger County, North Texas. A new pool is in the making in Gaines County. It was opened by a test of Amon G. Carter and Continental Oil Co. estimated to be good for 250 bbls. a day. The Mason pool in Loving County was extended 1½ miles, and Penn pool, Ector County, which has been quiet for a long time, was extended a half mile. Southeast of Eastland a pay sand was found at 1,450 feet in a wildcat and the well looks like a pool opener. Southwest Texas claims two new fields, one gas and the other oil. An outpost in the Midway district in San Patricio County is showing oil. The gas discovery is west of the Government Wells field. In the Texas Gulf Coast district discoveries were made in Matagorda and Jefferson counties, and there are prospects of a new pool in Liberty County. The Matagorda discovery is 1½ miles southwest of the Buckeye field and the Jefferson showing is southwest of the Amelia field.

CALIFORNIA

Twelve wells were completed in the Wilmington field in California, one of the major discoveries of the past 12 months. A third productive zone in Wilmington yielded a 273-bbl. initial production from the discovery well, bottomed at 5,355 feet. The well has not yet been completed.

KANSAS

A Viola lime pool was opened in Barber County, Kansas, northwest of the Whelan pool. The Ness County well of Newton Development Co. swabbed 50 bbls. an hour for four hours. It is to be acidized. Kiowa County in southwestern Kansas is to get a test by the Stanolind and Amerada companies, jointly.

OKLAHOMA

Seventy-three oil wells were completed in Oklahoma, including a 3,796-bbl. well in the Billings pool, which was the best of the week's crop of new producers. Fifteen wells were completed in the Fitts pool.

MICHIGAN

The Buckeye field in Gladwin County, Michigan, will have a new pipe outlet with a capacity of 16,000 bbls., which will give that field a 34,000-bbl. market. The best well in the field last week was a 1,000-bbl. producer of the Gordon Oil Co.

EASTERN FIELDS

A 20,000,000-foot gasser in Kanawha County, West Virginia, featured developments in the Eastern field.

Completions in All Fields

(Week Ending June 19, 1937)

	Oil	Gas	Dry	Total	1937 total comp. to date	1936 total comp. to date
N. Y., Pa., W. Va.	59	19	9	87	1,751	1,371
Ohio	5	10	4	19	485	300
Indiana	0	0	0	0	42	80
Kentucky	8	1	0	9	222	102
Illinois	0	0	0	0	29	23
Michigan	8	0	1	9	394	327
Kansas	38	2	17	57	1,125	722
Oklahoma	73	3	26	102	1,345	1,160
Texas:						
North Central Texas	33	0	52	85	1,344	1,317
West Texas	61	0	2	63	1,218	652
Texas Panhandle	20	2	0	22	313	321
East Texas	40	0	0	40	996	1,298
East Central Texas	19	0	2	21	333	127
East Texas Border	6	1	0	7	194	29
Gulf Coast Texas	27	2	5	34	682	551
Southwest Texas	35	3	11	49	1,526	1,330
Total Texas	241	6	72	321	6,606	5,625
North Louisiana	11	7	0	18	308	316
Gulf Coast Louisiana	3	0	3	6	215	188
Total Louisiana	14	7	3	24	523	504
Arkansas	2	0	1	3	57	46
Montana	4	0	1	5	76	88
Wyoming	0	0	0	0	44	42
Colorado	0	0	0	0	6	16
New Mexico	22	1	0	23	367	253
Utah	0	0	0	0	0	4
California	30	0	12	42	688	527
Total United States	504	49	146	701	13,760	11,190
Total previous week	492	51	106	649		
Difference	12	2	40	52		

Outstanding Fields—Highlights

(Week Ending June 19, 1937)

Field—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Amelia	5	11	6	2,969	54	3,757
Hastings	2	18	5	2,826	195	14,370
Flour Bluff	0	8	....	.....	54	4,020
Saxet	9	32	11	1,605	464	38,200
East Texas	37	118	40	2,583	22,923	469,947
Talco	9	30	12	2,831	353	31,650
Ector County	20	95	13	12,336	450	23,110
Winkler County	15	62	17	47,914	1,271	44,200
OKLAHOMA						
Oklahoma City	2	7	3	1,202	1,125	149,950
Fitts	5	54	15	7,284	778	97,900
Olympic	0	10	2	65	361	13,625
KANSAS						
Ellis County	9	33	8	14,331	114	7,480
Reno County	6	32	2	537	432	18,770
Russell County	12	66	8	6,749	708	28,295
Rice County	11	65	7	4,835	868	49,015
NEW MEXICO						
Lea County	12	96	18	16,754	2,213	113,570
LOUISIANA-TEXAS						
Rodessa, La.	5	15	3	2,100	380	48,565
Rodessa, Tex.	7	26	6	2,971	291	35,205
Lisbon, La.	7	14	3	2,345	39	7,800
MICHIGAN						
Buckeye	23	103	4	2,800	113	14,910

HOW SMALL DO YOU WANT IT- OR HOW BIG CAN WE SHIP IT?

Welded steel fractionating tower, 77 feet high by 8 feet 6 inches diameter. Built and recently shipped by J. P. Devine Manufacturing Co., Inc., Mount Vernon, Illinois.

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DEVINE builds fractionating towers, heat exchangers, condensers, and other items of refinery equipment —big or little—to your design or to our own.

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Eastern Field Report

By STAFF CORRESPONDENT

KANAWHA ORISKANY WELL GOOD FOR 20 MILLION FEET

PITTSBURGH, Pa., June 21.—A completion in Kanawha County, West Virginia, sets a new peak for initial volume in that Oriskany gas pool. In Poca district, Godfrey L. Cabot, Inc., completed a test on the J. E. and M. D. Good farm and it gauged slightly in excess of 20,000,000 feet a day. Top of the Corniferous lime was at 4,705 feet; top of the Oriskany 4,800 feet; with the top of the gas 4,813 feet. It is located a little more than half a mile due south of Sissonville and is 2 miles west of the nearest gas well in the field and 3 miles north of the Oriskany gas well on the G. W. Facemyer farm. This adds a considerable extension to the field.

West of Poca district, this operator's test on the Sarah Ann Null farm in Union district, Kanawha County, becomes interesting with a good volume of gas at 1,809 feet, either the Keener or the top of the Injun sand. The gas gauges 2,250,000 feet a day and is accompanied by a heavy head of water.

SOUTHEAST OHIO

In Columbiana County, southeast Ohio, the Natural Gas Co. of West Virginia has made a location on the J. C. Workman farm about a half mile west of the Oriskany gas well on the Margaret Jenkins farm in section 28, Madison Township. This company's test on the D. Deseilem farm in section 26, Wayne Township, is drilling at 2,800 feet.

In Athens County, the Chartiers Oil Co. completed No. 2 Eilen Stratton in section 5, York Township, in Clinton sand at 3,537 feet, a gas well gauging 500,000 feet a day. There was a small showing of oil. Near Cannanville in section 12, Lodi Township, C. W. Nuzum on the Harry Judson farm drilled through second Berea sand to 1,546 feet. It will be abandoned.

In Jefferson County, section 3, Cross Creek Township, O'Day Oil Co. completed No. 11 McConnell in Berea sand at 1,278 feet. It produced 10 bbls. the first day after shot.

In Knox County, Preston Oil Co., on the William Miser farm in section 22, Union Township, drilled through Clinton sand to 3,040 feet. It was dry and plugged.

In Monroe County, John Lumbatis and others completed a gas well on the George Fogle farm, section 9, Franklin Township, gauging 1,000,000 feet a day from the Salt sand, total depth 965 feet.

In Perry County, D. C. Moffet & Co. drilled a test on the M. D. Howdyshell farm, section 20, Monday Creek Township, through Berea sand to 900 feet. It had no showing of oil or gas.

In Tuscarawas County, the test of the East Ohio Gas Co. on the Eva O. Price farm, a half mile north of Zoarville in Sandy Township, completed some months ago in the Clinton sand at 3,680 feet and it gauged 1,500,000 feet a day. It now makes about a quarter of a barrel of oil a day.

SOUTHWEST PENNSYLVANIA

Two gas wells and one oil well were completed in southwest Pennsylvania. In Amwell Township, Washington County, South Penn Oil Co. completed No. 4 J. Q. Zimmerman in the Fifth sand and it is showing for 25 bbls. a day. Sand was topped at 3,021 feet with oil showing at 3,021-3,023 feet. It may be deepened to the second pay.

In North Strabane Township, Washington County, Keystone Gas Co.'s test on the J. H. Hixon farm had Salt sand at 1,275 feet and gauged 600,000 feet a day with a rock pressure of 185 pounds.

In Cumberland Township, Greene County, Greensboro Gas Co. deepened No. 1 Barclay from 1,016 feet, the Little Dunkard sand, to 1,311 feet. The top of the gas sand was at 1,245 feet with 1,152,000 feet of gas at 1,307-1,310 feet.

In Amwell Township, Washington County, A. V. Lewis and others have a rig standing for No. 2 Tucker heirs farm, and have reached 2,915 feet deepening No. 2 W. Dodd. Moore, Orrill and others have a location for No. 4 J. H. Hazlett. The Equitable Gas Co. is drilling down 1,907 feet on the Mary Walker farm. The Peoples Gas Co. is drilling at 660 feet on the Walter Redd farm. The Union Gasoline & Oil Corp. has reached 2,435 feet on the A. O. Vankirk No. 6, and spudding in the No. 2 on the Hazlett farm. The Carnegie Natural Gas Co. is down 735 feet on the C. W. Farbee No. 2.

In South Strabane Township, the Carnegie Natural Gas Co. is drilling at 2,038 feet on the S. W. Bails farm. The Emerald Petroleum Co. is at 872 feet on the Mose Little farm. Victor Behm and others are fishing for the tools at 1,700 feet on the Lucy Smith farm.

In South Franklin Township, Washington County, Union Gasoline & Oil Corp. is drilling at 2,772 feet in No. 2 H. L. Day, and is building the rig for a No. 4 B. F. McClain.

In Greene County, Union Gasoline & Oil Corp. completed the rig for No. 4 Mabel Bodley. The South Penn Oil Co. is drilling at 750 feet in No. 11 Samuel Harvey. The Carnegie Natural Gas Co. completed rig for No. 2 J. H. Orndoff. J. B. Orndoff has a rig standing for No. 2 Mattie I. Scott.

In Richhill Township, Greene County, Smith McCracken is drilling at 800 feet on the Asa Hughes farm. The Manufacturers Light & Heat Co. is fishing at 2,290 feet on the O. M. Grinnage farm. In Springhill Township, James H. Null, Agent, is deepening the test on the John Sellers farm and drilling at 2,082 feet. In Aleppo Township, Cochran & Cochran is down 2,785 feet on the John Strope No. 3.

The Equitable Gas Co. is drilling No. 3547 at 2,060 feet on the Z. D. Griffith farm in Gilmore Township, and at 2,663 feet deepening No. 1 William Hoge, Jefferson Township, and moving in tools to start deepening No. 1 B. F. Thralls in Wayne Township.

Deep Tests

The Potter Development Co., William E. Snee and others recovered the bailer lost at 7,000 feet in the test on the Indiana Savings & Trust Co. lease in Fairfield Township, Westmoreland County, and reached bottom. A cement spray bailer was run and this was lost 150 feet off bottom and later recovered. There is considerable caving on bottom which was at 7,594 feet. There is still the same amount of gas from the Onondaga.

In Washington County, Norwood Johnston and others have a reamer stuck in the hole along side the tools in the test on the James McBurney farm in Mount Pleasant Township, and at a depth of 6,171 feet. The lost tools were drilled by, and then the reamer followed to enlarge the hole but a gas blowout occurred which kinked the line and spun the tools. Both are believed recoverable as a hole is now drilled by the lost reamer bit.

In Allegeny County, South Penn Oil Co. and others have started drilling on the Christian Z. Schove farm in Hampton Township on the Kellersburg Anticline.

A. J. Wise, Jr., and others drilled 5½ feet in the Oriskany sand in the test on the Beaver Falls Airport Corp. lease in South Beaver Township and water rose 600 feet in the hole. The test has been plugged.

WEST VIRGINIA

There were three producers completed in West Virginia during the week. In Ritchie County, the West Virginia Investment Co. completed a No. 20 Joseph Parks in Injun sand at 2,081 feet. It is good for 10 bbls. a day.

In Pleasants County, Feemey Oil & Gas Co. completed a test on the C. B. Martin farm in Jefferson district in Squaw sand at 1,660 feet and it is a half-barrel pumper.

In Roane County, W. B. Heeter completed No. 2 W. B. Heeter and others lease in Curtis district at 1,735 feet as a 2-bbl. well. The Salt sand was at 1,680 feet with the oil at 1,704-1,706 feet.

Oriskany Gas Field

The United Carbon Co. completed a good gas well in the Oriskany gas pool in Kanawha County on the J. A. Moss and others farm in Poca district at a final depth of 4,850 feet. It gauges 11,729,000 feet a day. The top of the Corniferous lime was at 4,724 feet.

This company has made a location for a test on the H. F. Miller and others lease in Poca district on Cool Spring Branch. In Elk district, the Columbian Carbon Co. has made a location for a test on the D. W. Willis, now Nellie M. Sleath, farm on Lick Branch due south of the W. F. Copenhaver farm.

Several tests reached the Corniferous lime during the week. In Elk district, the United Fuel Gas Co. reached the top of the Corniferous at 5,014 feet in the No. 4706 on the C. B. Graham farm. The Columbian Carbon Co. topped the Corniferous at 5,010 feet in the test on the R. L. Wolfe farm and at 5,028 feet in the test on the John Summers farm. The United Carbon Co. reached the Corniferous at 4,917 feet in the second test test on the H. C. Smith farm.

In Poca district, the United Fuel Gas Co. reached the Corniferous at 5,011 feet in the No. 4712 on the A. J. Bruen and others lease. Here, Guy B. Ray has reached 4,797 feet in the test on the Elmer Thaxton and others farm which appears the next deepest well drilling in the district.

In Union district, the Glen Oil & Gas Co. is drilling at 4,795 feet in the test on the Virginia Joint Stock Land Bank. Godfrey L. Cabot, Inc., has rigged up the test on the C. W. Richardson farm. The Grandview Gas Co. is drilling at 1,200 feet on the Grand Memorial Park Co.

Gas Wells

The largest gas well above the Oriskany for the week was the test of the Massey & Jarvis Drilling Co. on the J. R. Lynch farm in Glenville Independent district which was completed after a blowout at 1,537 feet in the Keener sand and it is gauged at 2,500,000 feet a day. In DeKalb district, Kenneth F. Ermlich completed a test on the J. A. Jeffries farm as a gas well in the Injun sand at a depth of 1,716 feet. It gauges 50,000 feet a day.

In Boone County, the Pawnee Corp. drilled a test on the T. L. Broun farm in Sherman district to 2,534 feet and it was dry.

In Cabell County, the Merritts Creek Gas Co. completed a second test on the Huntington Orchards Co. lease in Guyandotte district at 3,244 feet; Brown shale 2,865-3,244 feet with 80,000 feet of gas at 3,190 feet.

In Calhoun County, the Hope Natural Gas Co. completed No. 3680 on the McIntyre and Rafferty farm in Sherman district at 1,942 feet, Big Injun 1,888 feet, with about 5 bbls. oil a day at 1,900-1,907 feet. It will be acidized. Ferrell & Bush completed No. 2 L. B. Carroll in Center district in Berea sand at 2,340 feet as a gas well gauging 200,000 feet a day.

In Kanawha County, the United Fuel Gas Co. completed a No. 4095 on the Sunday Creek Coal & Land Co. in Cabin Creek district in the Berea sand at 2,530 feet and it is good for 55,000 feet a day.

In Lincoln County, W. C. Kingery and others deepened No. 5 Lincoln County Poor Farm in Carrol district to 3,785 feet. The Brown shale was at 3,000-3,309 feet with 37,320 feet of gas at 3,200 feet.

(Continued on Page 124)

S&J Gauge Hole Covers for All Types of Storage

S. & J. Gauge and Thief Hole Covers have been designed to cover all of the operating conditions encountered in ordinary and high pressure refinery storage, and in bulk storage plants.

The design of S. & J. covers insures the conservation of vapors and precludes the admission of water and dirt to the tank through this avenue. Their manufacture incorporates that extra quality which reflects long life and low maintenance. Note individual descriptions below.

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Southwest Texas District

By GEORGE WEBER

FIND ONE NEW OIL AND ONE GAS FIELD; POOLS EXTENDED

HOUSTON, Tex., June 21.—Two new fields, one a gas field, were brought in during the past week in Southwest Texas, and other established production was extended during the past week. The principal developments along this line were carry-overs from the previous week, bearing out expected results.

With few exceptions, the lower Gulf Coast area saw greatest activity, as new outpost wells and wildcats get under way. The Luby field, named this week by the South Texas Geological Society for Nueces County's tenth oil pool, is not yet on commercial production, but tests have established the field discovery. In San Patricio County, the Midway field, a recent discovery, is being extended 1 mile to the north by a second test drilled by the discoverers, Phillips Petroleum Co.

Duval County developments were restricted mainly to the North Sweden field, and to the new gas field opened west of the Government Wells pool. The Killam field of Webb County gained another new oiler, and wells were completed in Lopez, O'Hern, Bruni and Escobas.

Luby Field

The Seaboard Oil Corp. No. 1 Luby, opener of the latest Nueces County oil field, is being reworked before placing it on commercial production. The wildcat, bottomed at 5,333 feet, was plugged back, and casing perforated at 5,045-50 feet, where oil sand had previously shown good saturation. The well was brought in making an initial production of 132 bbls. per day on a one-eighth inch choke. Tubing pressure was recorded at 1,450 pounds and casing pressure stood at 1,625 pounds. Because of increasing pressures and gas production, the well is being killed to rework.

The new Luby field is located 9 miles west of the Chapman Ranch field, and southeast of the Clara Driscoll field. To the south of the new field, Taylor Petroleum Co. No. 1 Styles is drilling below 6,460 feet. Seaboard has also staked another test on the Chapman ranch, the No. 1-C Chapman. The new wildcat is located in section 111, of the Laureles Farm tracts, 4,000 feet north of the Kleberg County line, and 4½ miles southwest of the Chapman Ranch field.

Other important Nueces County wildcats were attracting attention during the week. The J. K. Culton No. 1 Singer is drilling below 2,600 feet in a south outpost location to the Flour Bluff field. The wildcat is located in Lot 13, Block 39, of the Encinal Gardens, about 2 miles south of production in the flush production area. It is the first test to be drilled in an outpost location to the field since its discovery, and will be watched with considerable interest. On the west of Flour Bluff, a second wildcat is getting under way. The Fain Gillock No. 2 Poenisch, in Lots 7 and 8, section 32, across Oso Creek from the field, has derrick up for a 2-mile westward outpost test. Elsewhere in the county, five other wildcat tests are active, centering considerable attention on Nueces County.

San Patricio Discovery

A major discovery in San Patricio County was made during the week, as Phillips Petroleum Co. opened a northern outpost well in the Midway field, to extend production nearly a mile. The No. 1 Ivey, located in the SE cor. of section "K," cored sand at 5,335-46 feet which showed oil. This body corresponds to the sand which is producing the Midway field to the south in the Phillips No. 1 Schmidt.

The long string of casing was set at 5,399 feet and first perforations were made at 5,346-49 feet where salt water was recovered in the subsequent test. Salt water was again tested after plugging and perforating at 5,340-43 feet when 550 feet of the fluid was recovered together with 1,100 feet of oil in 10 minutes and at 48 pounds working pressure. Next the bottom foot between 5,342 and 5,343 feet was plugged off, and at latest reports the well was cleaning and making an estimated 40 bbls. of fluid, consisting of half oil and half wash water. Pressures were 175 pounds on the tubing and 500 pounds on the casing.

In the same general area as the Midway field, but located 3½ miles southwest of Taft, Conroe Drilling Co. met with failure in No. 1 Foley, abandoned as dry at 6,500 feet. Three other wildcats are active in the county, however, all three located in the Gregory district, in the southeastern section of the county.

Two new tests are to get under way shortly. The Plymouth Oil Co. will drill a test half a mile east of Sinton. No. 1-A Odem is scheduled to go 7,500 feet. The Wellington Oil Co. is reentering the old Angelita district with a test on the Welder lease in the SE quarter of section 6, 1½ miles northwest of the discovery well. Wellington, which then consisted of Atkins and O'Neil of Santa Clara, were instrumental in the discovery and limited development of the field in 1934. The new test, No. 1-B Welder, is located in the SW portion of the county.

Aransas Activity

Aransas County activity is on the increase, with a number of new locations staked in the McCampbell field. Buckingham Oil Co. will drill several wells in search of the newly opened production at the 7,110-foot level, which promises to greatly enhance the importance of the field. The single wildcat in the county, Barnsdall Oil Co. No. 2 Kate Edwards, is drilling below 8,700 feet. The test is located on the Lamar Peninsula offsetting the No. 1 which blew out at 7,996 feet and cratered several months ago.

In Nueces County the Saxet field saw a busy week with 11 new completions and 1 dry hole. Most of the new producers were flowing from the Clarkwood sands, but others were completed in the shallow 3,800-foot horizon south of Clarkwood, and some were brought in from the deep 6,700-foot sand.

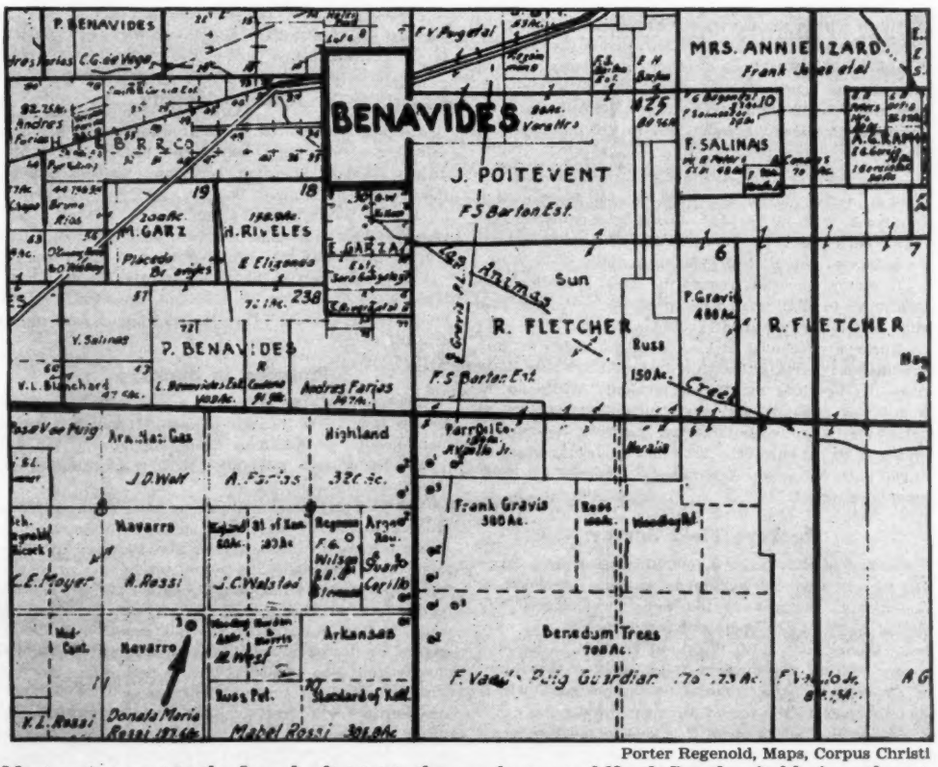
The Magnolia Petroleum Co. has cored an interesting sand in No. 1 Seeligson, located in Jim Wells County. The wildcat, bottomed at 5,404 feet, recovered 17 feet of distillate on a drill-stem test reported at 5,380-86 feet and was preparing to retest. Working pressure on the drill-stem test was reported as 200 pounds. The wildcat is located 1 mile west of the Kleberg County line, and 4 miles southeast of the town of Ella, being in the Los Jaboncillos grant.

To the south in Brooks County, another new sand was cored. The Standard of Texas encountered a sand which on a drill-stem test at 4,516-26 feet made 60 feet of fluid, consisting of 30 feet of clean oil and 30 feet of frothy mud, oil and salt water. Operators are coring ahead.

Duval County

In Duval County one new producer was added to the North Sweden field, being Reynosa Oil Co. No. 1 Wilson, extending production in the new field one-third of a mile to the west. The field is the most active in the Laredo district, and further interesting develop-

(Continued on Page 94)



Porter Regenold, Maps, Corpus Christi

Most active spot in the Laredo district is the newly opened North Sweden field of southeastern Duval County. With ten active rigs drilling in the area, the field is due for rapid development. Navarro Oil Co. No. 1 Rossi indicated by the arrow, spudded this past week

Michigan Field Report

By
O. C. PRESSPRICH

BUCKEYE FIELD IS ASSURED GREATER PIPE LINE OUTLET

SAGINAW, Mich., June 21.—The McClanahan-Leonard Pipe Line Co., with a capital of $500,000, is already at work on a pipe line from the Buckeye field in Gladwin County which will ship Buckeye oil to the McClanahan refinery at St. Louis and the Leonard refinery at Alma. It will have a capacity of 16,000 bbls. a day, which will give the field a total outlet of about 34,000 bbls. a day.

Buckeye has been greatly handicapped by insufficient pipe line facilities although the two lines that have served it took all the oil they could carry and more than they could market, making it necessary for the purchasers to store oil. Recently both pipe lines announced they would have to cut their runs to fit their market requirements, which caused the producers to get together on a proration movement. The two pipe lines already in the field are Simrall Pipe Line Co. and Pure Oil Transportation Co.

Attention of Michigan oil operators focused on two widely separated pools—the Salem Township pool in Allegan County and Buckeye Township in Gladwin County—as efforts to extend proved territory in these fields progressed.

While the new efforts could be termed wildcats, even in the Buckeye field, the tests nevertheless had a solid background and may go a long way toward extending borders of the two fields into heretofore untried territory.

Allegan County, through its newly developed Salem Township field, stole some of the spotlight away from Buckeye, although still far short of the prolific north central Michigan field. With the eighth well completed in Allegan County, production of the field was raised from approximately 2,500 bbls. to 3,900 bbls. daily. The addition was Muskegon Oil Co.'s latest well.

The Allegan field was expected to extend its proved territory within the next week by additions in several directions, while Buckeye drillers are due to push the borders of the Wicklund discovery pool both east and west at the southern border and also to extend the east and west limits of the midway pool east and west from the Hanners "telltale" well in the midway location.

As proration curbed the Buckeye Township oil field to a flat allowable of 150 bbls. a day per well this week, with no surplus allowable, May production under curb was reported at 16,280 bbls. daily against an estimated potential of 75,000 bbls. daily.

Operators generally regard the latest proration step as a move to eliminate chiseling among operators, possible under the surplus allowable.

Buckeye continued to lead Michigan fields in May production reports, although a drop of 1,223 bbls. daily from the previous month was evident. While no attempt was made at the recent proration meeting to determine the actual potential of the field, it was estimated at 75,000 bbls. daily after having been gauged at 64,000 bbls. two weeks ago, because several good wells have been added.

Buckeye Field Survey

Survey of the Buckeye field this week by a large operator showed 242 wells and locations completed or under way. There were 102 wells producing at the end of May. When operators recall that it was only last January that J. V. Wicklund brought in the discovery well in the Buckeye field, starting the flurry of development, they marvel at the progress which shot the pool to the top of Michigan production.

One of the quirks of oil field development came to light recently. Beaver Trust No. 4-A State in SW NW NE section 14 came in originally so light it barely could be termed a producer. After an acid treatment the well produced about 400 bbls. daily. The odd part was that the well is surrounded by good producers in the heart of proved territory, only two locations south of the discovery well, which topped 1,200 bbls.

Operators estimate that $10,000,000 had been spent in the Buckeye field in five months for drilling, rigs, tanks and other equipment, exclusive of royalties and bonuses and the cost of leases.

Midway field drilling holds the spotlight of interest the coming week, with two wells in section 24 due to reach pay sand. It is practically the only nearby development in the Buckeye field outside of proved territory, and if successful will open up a large territory lying to the east of the Hanners discovery well in the midway pool. The wells are Fletcher & Rathburn No. 1 Shumway, NE SW SE section 24, drilling 45 feet in the Dundee, and Fortney Oil Co. No. 1 McMahon & Converse No. 1, NW SW NE section 24.

Other wells expected to be completed in a few days included the following, all in proved territory: Beaver Trust No. 1 Thomas, NW NW NW section 13; Beaver Trust No. 2 Upton, NE SE NW section 36; Clark & Johnson No. 4 McMahon, SW NW SW section 36, and Gordon Oil Co. Nos. 1 and 2 Trego.

Among completions of the week topping the list was Gordon Oil Co. No. 4-A Havens, SW SW NW section 36, which came in with a 1,000-bbl. initial potentials based on a three-hour test. The same company's No. 1-A State, SW SW NE section 36, is believed to rate nearly as well as the No. 4-A Havens, with accurate gauges lacking.

Beaver Trust No. 3 Upton, SE SE NW section 36, started at 500 bbls. a day, while the same company's No. 4-B State, SW NW NE section 14, developed slightly more than 500 bbls. under gauge.

Bell & Marx No. 2 Lincoln Life, NE NW SE section 35, was reported at 700 bbls. natural production, and attested the probability of further westward extension in the extreme south part of the south Buckeye pool.

Isabella County

Pure Oil Co. reported three producers and a dry hole as a summary of the week's activities. The three producers were in Sherman Township, Isabella County, the dry hole in Midland County.

The producers were 3-A Embrey, SE NE NE in section 33, which came in at 346 bbls.; No. 3 Latham, N half SE SE in section 33, which developed 904 bbls. for the top production of that field, and the No. 4 Latham, NW SW SE in section 33, a 664-bbl. producer. The dry hole was the Corning 2-D in Midland County, completed at 3,461 feet.

Proration in Buckeye

Proration of 150 bbls. a day per well became effective June 16 in Buckeye township, Gladwin County, most prolific of Michigan fields, supplanting the former curb of 100 bbls. plus 10 per cent allowable, effective since June 1.

The flat 150 bbls. with no surplus allowance was ordered to provide a stricter supervision by the proration referee on the output of the field, and to determine more accurately the actual production of a well under proration. While the Buckeye field produced a total of 16,280 bbls. of oil per day from 102 active wells in May, this figure was not expected to be increased or decreased by lifting increasing basic allowable from 100 to 150 bbls. This is because of the discontinuance of the surplus allowance.

Operators who are members of the proration committee express approval of the new flat allowable, saying it probably will stand for some time unless a flurry of wells now under development causes a reduction in the basic allowance due to big producers coming in.

James C. Graves, proration committee chairman, and C. A. Smith, jr., secretary of the committee, both large operators in the Buckeye field, expressed approval over the latest curb to result in tightened supervision.

Wildcats made up an unusual list of permits issued the week ending June 16, with Buckeye township, Gladwin County having five wildcat permits, all taken on unproved territory. From the permits east and west extension of the north Buckeye pool is indicated to push farther outward the limits of the north Wicklund pool, while two permits indicate that wildcatting will continue in the midway pool uncovered by the Hanners well. The Buckeye permits to further test the Wicklund pool are as follows: Section 9, James E. Flanigan No. 1 Schultz, NE SE NW; section 10, Mammoth Producing & Refining Co. No. 3-C State, SE SE SE; section 12, Cryden Petroleum Corp. & Rowmor Corp. No. 8 Shaffer, SE SE SW; section 23, Rex Oil & Gas Co. No. 1 Woodring, NW SW SE; section 24, Swanson Consolidated No. 1 Flory Estate, SW SW NE.

Salem township in Allegan County topped the list, with seven permits issued to probe in Michigan's latest oil pool, developed in the Traverse sand.

Among the 18 permits issued for the week, with Allegan County having seven and Gladwin County five, the following counties received one each: Gratiot, Huron, Isabella, Ogemaw, Montcalm. The Huron County permit, issued for Haldane No. 1 is termed the wildest sort of wildcat. Drillers were down 200 feet this week in a test in section 30 of Colfax Township. The test is three miles from a dry hole drilled two years ago in the Upper Thumb territory.

Allegan County

Allegan county's fast developing Traverse pool attracted further interest among operators by adding production through completions and acidization. The Salem Township pool is definitely in, operators say, judging from May production figures when the pool raised its production from two wells yielding 116 bbls. a day to three wells making 374 bbls. Two producers this month, rating close to 1,000 bbls. combined will jump production again.

The Muskegon Oil Co. No. 1 Moomey which initialed 500 bbls., settled to an output of 250 bbls. No. 2 Moomey in SW NE SE section 17 which came in for over 500 bbls. may be acidized. Among the acid treatments in the Allegan pool were Lentz & Miller No. 1 Brenner, SW NW NW, most northerly producer in the field, resulting in between 40 and 50 bbls. an hour. The well was completed in the Upper Traverse formation at an approximate depth of 1,615 feet. Lentz & Miller No. 1 Buege, in SE SW NE section 17 was expected to rate 1,000 bbls. a day after acidization.

Southwest Texas Fields

(Continued from Page 93)

ments are due as outpost tests now starting reach critical depths.

The new gas area west of Government Wells was opened during the week by completion of the Government Wells Oil Co. No. 1 Lundell in section 140. The test, located 1 mile west of production, made 5,000,000 feet of gas on a test. Perforations were made at 1,680-1,700 feet. The operators are moving in on a second test.

The Fault Line zone, already very active in Caldwell and Guadalupe counties, is due for further development along the southwestern portion, according to leasing activity in Maverick and Zavalla counties. Important leases are being taken in that area and geophysical exploration is being contracted.

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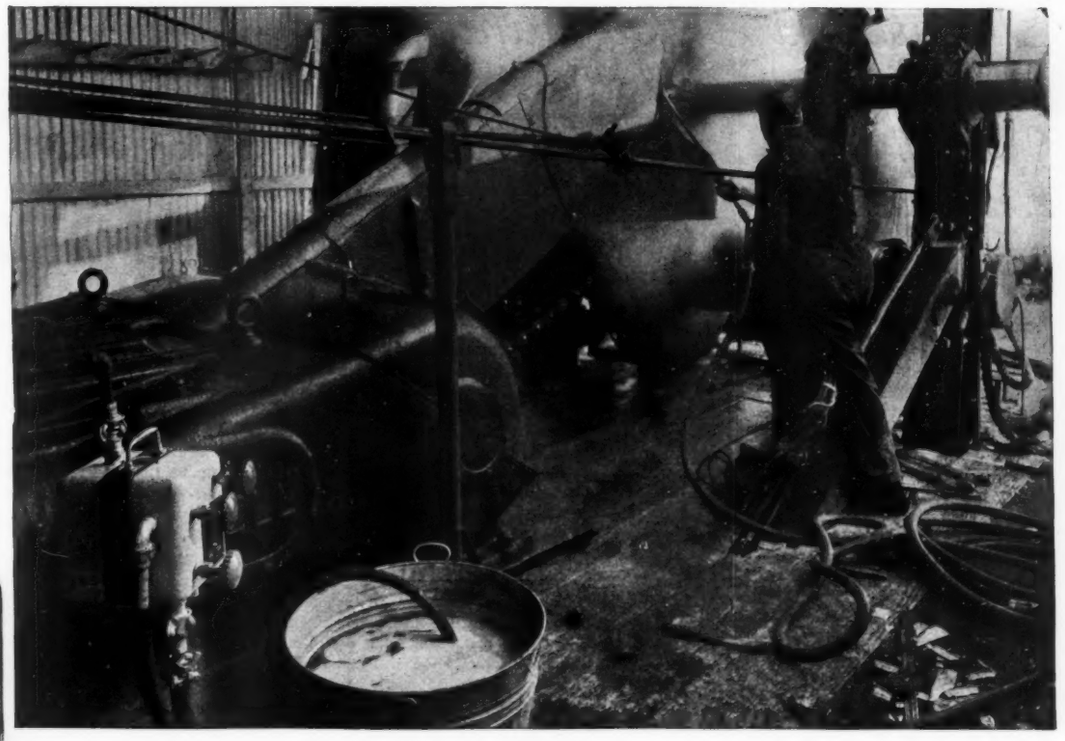

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Texas and Louisiana Gulf

By F. L. SINGLETON

JEFFERSON AND MATAGORDA COUNTIES HAVE NEW POOLS

HOUSTON, Texas, June 21.—With the discovery of two new fields in Matagorda and Jefferson counties and the prospect of a new field being opened in Liberty County, the Texas Gulf Coast district experienced a very eventful week of developments.

Two and one-half miles southwest of the Buckeye field, Matagorda County, United North and South Development Co. No. 1 Stoddard opened another deeply-seated type of field from the Frio sand, when it flowed 5 bbls. of 37.7 gravity oil per hour through a three-sixteenths inch choke with the tubing pressure 3,450 pounds and shut-in casing pressure 3,300 pounds. It is making an estimated 2,500,000 feet of gas daily.

The well made its appearance as a pool opener when it tried to blow out after a core had been taken at 9,952-72 feet. It was killed and the hole cored to a total depth of 9,982 feet with the operator recovering broken shale and sand showing oil and gas. Location is in the J. S. Cotton Survey.

The Cheek Prospect in central Jefferson County, southwest of the Amelia field, was opened as a distillate field by the completion of Magnolia Petroleum Co. No. 1 J. H. Phelan which is shut in after flowing an unestimated amount of slightly colored distillate on an 11-hour test. The shut-in casing pressure is 3,000 pounds, and tubing pressure 3,100 pounds. The hole was drilled to a corrected depth of 8,573 feet and was completed from a screen setting made at a plugged-back depth of 8,440-60 feet. The well is on a large block centering around the T&NO Survey No. 14, and is producing from the lower Frio sand.

Hardin Area

Interest along the Gulf Coast is now centered on the Hardin area, eastern Liberty County where Jack Frazier is running casing preparatory to testing No. 1 Hanchey located 2½ miles southwest of the Hardin field discovery well. On a 10-minute drill stem test at 7,488-7-612 feet, through quarter-inch chokes, top and bottom, it tested 400 pounds of pressure and 360 feet of drilling mud, cut with oil and 180 feet of drilling mud and oil, estimated at 25 per cent oil. A Schlumberger survey showed 5 to 8 ohms resistivity and from 45 to 60 millivolts porosity at 7,601-7,612 feet. The hole is bottomed in the Upper Saline Bayou horizon, having topped the Discorbis Yeguaensis between 7,439-69 feet and the Eponides Yeguaensis at 7,532 feet.

The Hardin field was discovered in 1935 by Frazier and others, and is producing from the Upper Saline Bayou at approximately 7,800 feet. The structure in the immediate area is very faulted which was confirmed by the abandonment of two dry holes, one drilled by Jack Frazier and others on the Searle tract in the Amos Green Survey abandoned at 7,701 feet, and the other Atlantic Refining Co. No. 1 Hardy, 3,660 feet north which quit at 8,110 feet.

Based on geological markers, the test is running approximately 75 feet higher and should it be productive it is expected to open a new field, rather than an extension. Location is in the Hugh B. Johnson Survey.

To the northwest and across the line in San Jacinto County, Cockburn Oil Co. No. 1 Whitten topped the Cockfield at 5,190 feet and is coring for the Conroe sand below 5,300 feet. A slight trace of gas and distillate was obtained in a core at 5,253-73 feet. It is northeast of Cleveland in the William West Survey. Along this same trend and located in the Splendora area, Montgomery County C. E. Gates No. 1 Texas Long Leaf Lumber Co. in the Waller County School Land Survey is coring in shale and boulders below 5,900 feet with no shows reported.

Old Ocean Field

In the Old Ocean field, Brazoria County, Harrison and Abercrombie No. 1 Bernard River Land and Development Co., the discovery well which was deepened from the discovery horizon of 8,600 feet to 9,875 feet, was perforated with 21 holes at 9,827-35 feet and is cleaning into the pit through a quarter-inch choke with tubing pressure 2,700 pounds. Same operators No. 4 Bernard is coring in sand and shale with an oil odor below 10,348 feet. Locations were made for No. 1 Christina Larsen and No. 1 Nellie L. Smith in the Charles Breen Survey.

The east extension test of Republic Production Co. and Houston Oil Co., No. 16 Brooks, Silsbee field, Hardin County is bottomed at 6,915 feet and is running a Schlumberger test. Based on two drill stem tests in the upper and lower sands, it is not looking encouraging. A 15-minute drill stem test at 6,885 feet showed no pressure, while a 7-minute drill stem test at 6,910-15 feet showed 150 pounds and 120 feet of sand and fresh water. The well is about 1,800 feet east of production in the G. W. Brooks Survey. To the south, and offsetting production, Humble Oil and Refining Co. first test, No. 1 M. L. Kirby topped the upper sand at 6,849 feet and is reaming the hole for a drill stem test after coring oil to 6,862 feet.

To the northeast and located 933 feet due west of the discovery well of the Spurger field (Joes Lake), Republic Production Co. and Houston Oil Co.'s No. 3 Hurd located in the N. Hurd Survey, tested 175 pounds pressure and 7 joints of oily mud on a drill stem test at 7,580-7-632 feet, and the hole has been cored to a depth of 7,640 feet, where a second test will be made at 7,632-40 feet at which point sand showing oil was recovered. The well is practically normal with the discovery well, completed the latter part of April that opened the first production on the Gulf Coast from the Queen City horizon. Due to the uniform condition of the sand has made this new area most attractive which will no doubt result in an increase in activity through this northern tier of counties.

In the Palacios field, Matagorda County, Glenn H. McCarthy No. 2 Foley Land Co., which was seven degrees off vertical at a total depth of 8,068 feet was unable to straighten the hole and after plugging back and sidetracking the drill stem became stuck at 8,000 feet and the operators are now fishing. Sun Oil Co.'s No. 1 Bay Shore Farms, Inc., a south offset to the discovery well has cemented 13⅜-inch surface casing at 1,910 feet.

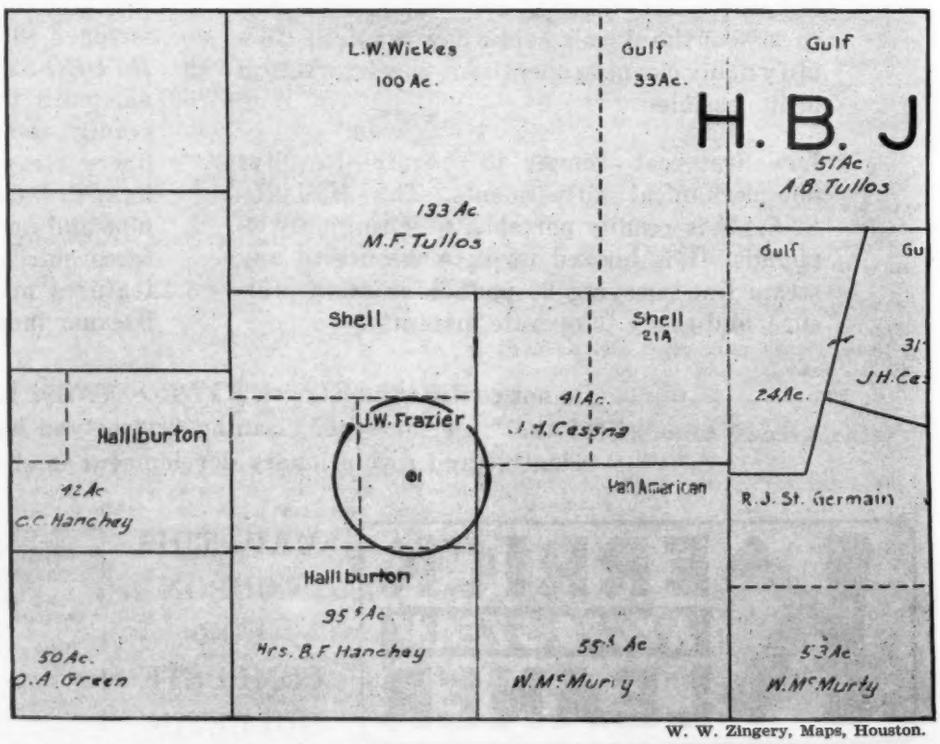
Humble Oil and Refining Co. No. 4-B Kirby an east offset to its No. 3-B Kirby located in the southwest extension area of the Segno field, Polk County topped sand at 5,327 feet and cored to a depth of 5,335 feet and 7-inch casing has been cemented at 5,320 feet. In the field proper, LaQuinta Oil Co.'s No. 5 Wing flowed 528 bbls. per day through a quarter-inch choke from a screen setting at 5,186-94 feet, the total depth.

Louisiana Coastal Fields

The twelfth producer for the southwest flank of the old Jennings field, Acadia Parish was added by the completion of Glassell and others No. 1 Troushell, which is flowing into pits at an estimated rate of 500 bbls. per day. Oil sand was topped at 7,041 feet and cored to a total depth of 7,156 feet. Seven-inch casing was cemented at 7,034 feet. Location is in section 42. In the same section, Superior Oil Co.'s No. 3 Jennings Heywood, topped sand at 6,530 feet and is running a Schlumberger test to a depth of 6,754 feet.

In the Valentine field, two new sands were apparently uncovered by Pan American Production Co. No. 5 Harang, section 8, topped sand at 5,886 feet and cored to a total depth of 5,892 feet while No. 6 Harang

(Continued on Page 139)



W. W. Zingery, Maps, Houston.

Jack Frazier No. 1 B. F. Hanchey, 2½ miles southwest of the Hardin field discovery well, Liberty County, which is the center of interest along the Texas Gulf Coast

Oklahoma Operations

By
DAL DALRYMPLE

WEEK COMPLETIONS TOTAL 102, INCLUDE 73 OIL WELLS

The Oklahoma completion list for the past week is remindful of old times in the Sooner oil fields, a total of 102 new wells being completed to set a high record for the year. The completions included 73 oil wells, 3 gassers and 26 dry holes. The Fitts field, Pontotoc County, set the pace with 15 new oil wells. In addition to the new wells, several old wells were deepened or plugged back and recompleted. First reports for the week totaled 74.

The Billings field, Noble County, continued a hot spot with three large producers being completed. A fourth well near completion was Tide Water Oil Co. No. 6 Hackett, NW SW SE section 21-23-2w, which made potential of 3,796 bbls. of oil from total depth of 4,332 feet in Wilcox sand.

Work was starting at a new wildcat north of Headrick, eastern Jackson County. It was E. L. Lippert and others No. 1 Miller, NW cor. section 4-2n-18w. It is to be a test to the granite.

Estimated Daily Production

Estimated daily production of Oklahoma for the week ending June 19, and for the preceding week, was as follows:

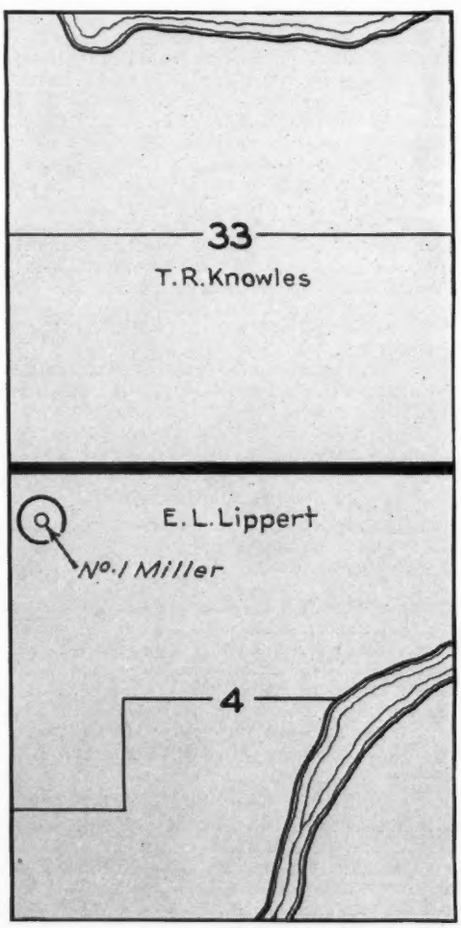
	Barrels	
	June 19	June 12
Allen	4,950	5,500
Billings	6,700	6,675
Burbank	8,125	8,125
South Burbank	15,950	16,225
Balance Osage	21,750	21,500
Blackwell district	5,350	5,325
Bristow-Slick	7,850	7,825
Chandler	3,050	3,150
Crescent	9,675	9,500
Cromwell	3,475	3,425
Cushing-Shamrock	10,700	10,500
Duncan district	4,075	4,050
Edmond	20,250	20,750
Fish	5,825	6,225
Fitts	97,900	84,225
Jesse	2,850	2,450
Graham	4,650	4,675
Gray	1,250	1,375
Healdton	9,975	9,950
Hewitt	4,475	4,450
Holdenville	900	900
Keokuk	9,250	7,425
Konawa	2,125	1,525
Lucien	15,750	15,600
Moore	15,250	14,280
Oklahoma City	142,950	168,575
Olympic	13,625	13,275
Polo	1,250	1,275
Sasakwa and townsite	2,300	1,900
Sholem-Alechem	3,225	3,225
Seminole:		
Bowlegs	11,250	11,925
Carr City	5,625	5,750
Earlsboro	6,475	6,525
South Earlsboro	675	625
East Earlsboro	7,450	7,575
Little River	10,750	11,725
East Little River	1,050	1,200
Maud	800	650
Mission	2,225	2,030
Seminole	9,475	9,375
East Seminole	2,975	3,000
Searight	4,750	4,500
Total Seminole	63,500	64,880
St. Louis-Pearson	21,525	20,575
Tatums	5,000	5,025
Tonkawa-Garber-Thomas	4,825	4,800
Wewoka	3,125	3,100
Yale-Jennings	4,150	4,175
Other pools	74,625	74,390
Total Oklahoma	632,200	640,825

Pontotoc County

The Cromwell and Hunton horizons continue to yield numerous producers in the Fitts field, Pontotoc County, 15 oil wells being completed the past week.

One of the large producers was Sinclair Prairie Oil Co. No. 1 McCarty, SE NW NE section 22-2n-7. It topped Hunton lime at 3,865 feet, total depth 3,904 feet, flowed 812 bbls. of oil in four hours and made potential of 3,339 bbls.

Other Hunton producers were: Phillips Petroleum Co. No. 17 Norris, SE SE SW section 25-2-6, Hunton 3,513 feet, Sylvan 3,763 feet, total depth 3,764 feet, acidized, flowed 201 bbls. of oil gross in two hours, reacidized, potential 3,116 bbls. Magnolia Petroleum Co. No. 1 Norris, SE SE NE section 21-2-7, Hunton 3,725 feet, total depth 3,765 feet, flowed 697 bbls. of oil in four hours through casing and tubing, acidized, potential 3,190 bbls. Navarro Oil Co. No. 1 Horn, NE SE NE section 22-2-7, Hunton 3,803 feet, total depth 3,833 feet, flowed 160 bbls. of oil in one hour, potential 1,740 bbls. E. H. Moore No. 2 Frasier, SE NW NW section 23-2-7, Hunton 3,934 feet, total depth 3,949 feet, potential 2,701 bbls. Bishop Oil Co. No. 3-A Simpson, SW NW NW section 28-2-7, Hunton 3,391 feet, Sylvan 3,632 feet, total depth



Mid-Continent Map Co., Tulsa.

E. L. Lippert and associates have started wildcat in section 4-2n-18w, Jackson County

3,636 feet, acidized, flowed 347 bbls. of oil gross in one hour, potential 1,292 bbls. E. H. Moore No. 2-B Woodruff, NW NE SE section 29-2-7, Hunton 3,252 feet, Sylvan 3,530 feet, total depth 3,542 feet, acidized, flowed 295 bbls. of oil in one hour and thirty minutes gross, potential 1,149 bbls. Magnolia Petroleum Co. No. 15 Harden, NE NE NW section 30-2-7, Hunton 3,599 feet, Sylvan 3,880 feet, total depth 3,887 feet, acidized, flowed 341 bbls. of oil gross in four hours, potential 1,433 bbls.

Cromwell sand producers were: Magnolia Petroleum Co. No. 13 Burris A, SE SW NW section 27-2-7, Cromwell 2,400 feet, total depth 2,560 feet, flowed 413 bbls. of oil through tubing in 24 hours. Same company's No. 14 Burris A, NW SW NE section 27-2-7, Cromwell 2,445 feet, total depth 2,590 feet, flowed 463 bbls. of oil through tubing in 24 hours. Same company's No. 15 Burris A, SE SW NW section 27-2-7, Cromwell 2,365 feet, total depth 2,525 feet, flowed 32 bbls. of oil through tubing in one day. Sinclair Prairie Oil Co. No. 17 Burris, SE NE NW section 27-2-7, Cromwell 2,468 feet, total depth 2,582 feet, flowed 205 bbls. of oil in 24 hours. Mabee Consolidated Co. No. 3 Smith, SW SW NW section 28-2-7, Cromwell 2,365 feet, total depth 2,580 feet, flowed 90 bbls. of oil in 24 hours. Amerada Petroleum Corp. No. 9 Smith, NE SW NW section 28-2-7, Cromwell 2,402 feet, total depth 2,553 feet, flowed 465 bbls. of oil in 24 hours through tubing. E. H. Moore No. 1-B Harper, SW SW NE section 29-2-7, Cromwell 2,465 feet, total depth 2,610 feet, flowed 62 bbls. of oil through tubing in 24 hours.

Wildcat Failure

Summit Drilling Co. and others No. 1 Whittaker, NW NE SE section 31-4-6, wildcat, was dry and abandoned at 3,754 feet, total depth. Tops follow: Wapanucka 1,370 feet; Union Valley 1,590 feet; Cromwell 1,600 feet; Mayes 2,395 feet, Woodford 2,445 feet, Sylvan 2,781 feet, Viola 2,815 feet, Bromide 2,985 feet, McLish 3,240 feet, Wilcox 3,576 feet, Oil Creek 3,645 feet.

New work in Pontotoc County: American Oil & Refining Co. No. 1 McClure, NW NW SW section 9-4-6, drilling at 1,810 feet; Mary F. Oil Co. and others No. 2 Miller, NW NW SW section 15-5-8, drilling at 300 feet; Mid-Continent Petroleum Co. No. 6 Statler, NE NE SW section 2-1n-7, building rig; Fleetborn Oil Co. No. 1-A Lewis, SE SE SW section 19-2-7, building rig; Loual Drilling Co. and others No. 1 Cradduck, SE NE SE section 25-2-6, an old well building rig to deepen; Amerada Petroleum Corp. No. 12 Woolley, SE SE NW section 22-2-7, an old well plugged back from 3,777 feet to 3,758 feet, flowed 706 bbls. of oil in 24 hours, cutting 1 per cent; Sinclair Prairie Oil Co. No. 19 Burris, SE NW NW section 27-2-7, and same operator's No. 20 Burris, SW NW NW section 27-2-7, rigs; Skelly Oil Co. No. 22 Park College, SE NE NW section 28-2-7, cellar and pits.

Cleveland County

Anderson-Prichard Oil Corp. No. 3 State, SW NW SE section 16-10-2w, Moore field, Cleveland County, was given arbitrary potential of 24,108 bbls. of oil daily. Gas gauged 97,300,000 feet. It topped second Wilcox sand at 2,730 feet, was bottomed at 7,285 feet, flowed 950 bbls. of oil in five hours, later flowing 1,091 bbls. in three hours.

Phillips Petroleum Co. and Anderson-Prichard Oil Corp. No. 1 Oklahoma, SW SE SE section 16-10-2w, was bottomed at 7,252 feet, and flowed 63 bbls. of oil an hour, initially. It was given arbitrary potential of 24,108 bbls. of oil daily. Gas gauged 10,000,000 feet.

Lincoln County

A new producing area was opened in eastern Lincoln County at Exchange Drilling Co. No. 1 Dowell, SE SE NW section 10-14-6, wildcat southwest of Stroud. It topped Cleveland sand at 2,230 feet, Oswego lime 2,975 feet, Prue sand 3,006 feet, total depth 3,065 feet, and pumped 48 bbls. of oil daily after a shot.

Other Lincoln County completions: Sinclair Prairie Oil Co. No. 1 Buckles, NW NW SE section 15-14-6, Prue sand 2,912 feet, total depth 2,922 feet, flowed 20 bbls. of oil daily. Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Angell, NE NE SW section 35-14-6, first Wilcox sand 4,174 feet, second sand 4,200 feet, total depth 4,207 feet, swabbed 84 bbls. of oil in seven hours, was shot, flowed 180 bbls. in 24 hours. Same operator's No. 1 Aranwine, SE NW SE section 35-15-2e, Dense 5,045 feet, total depth 5,100 feet, flowed 586 bbls. of oil by

heads, and flowed 1,175 bbls. in 24 hours on test. Gulf Oil Corp. No. 1 Lee, NW NW SW section 36-15-2e, first Wilcox sand 5,070 feet, second sand 5,155 feet, total depth 5,193 feet, swabbed 225 bbls. of oil in 24 hours, and on completion test flowed 153 bbls. of oil daily, with 47 bbls. of water.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 2 Aranwine, SE NE SE section 35-15-2e, was drilling at 1,575 feet. Ross Oil Co. No. 1 Bailey, SE cor. section 22-15-6, wildcat, was drilling at 1,500 feet.

Skelly Oil Co. No. 1 South Sporn, NE SE SE section 20-17-3e, had Wilcox sand at 4,601 feet, total depth 4,618 feet, flowed 316 bbls. of oil in 20 hours, was acidized and flowed 278 bbls. of oil in 24 hours through choke.

Oklahoma County

A trio of wells were completed in the Oklahoma City field, Oklahoma County. Olson Drilling Co. No. 1 Jones, NE SE SW section 15-12-3w, topped Simpson formation at 6,361 feet, total depth 6,461 feet, and flowed 583 bbls. of oil daily.

Larkins & Warr No. 1 Military, NE NE SW section 34-12-3w, had second Wilcox sand at 6,405 feet, was bottomed at 6,516 feet, and made minimum potential of 268 bbls. of oil, on pump. Same operators' No. 2 Lucas, NE NW SW section 36-12-3w, was bottomed at 6,375 feet, flowed 1,565 bbls. of oil in 24 hours, cutting 20 per cent, and on completion test flowed 351 bbls. in 24 hours on gas lift, cutting 60 per cent water.

Travis Petroleum Co. No. 1 Neff, NW NE NE NE section 35-12-3w, was building rig.

Noble County

Largest of three producers completed in the Billings field, Noble County, was Tide Water Oil Co. No. 2 Shaffer, NW NE SW section 21-23-2w, on the west edge of the field. It had Wilcox sand at 4,334-39 feet, total depth, flowed 759 bbls. of oil in six hours and made potential of 2,984 bbls.

Phillips Petroleum Co. and Shell Petroleum Corp. No. 12 McCaughtry, NW NW NE section 21-23-2w, topped Wilcox sand at 4,276 feet, was bottomed at 4,312 feet, flowed 622 bbls. of oil in six hours and made potential of 2,204 bbls.

Continental Oil Co. No. 2 Conway, NE NE NW section 21-23-2w, flowed 427 bbls. of oil in six hours, making potential of 1,500 bbls., from Wilcox sand topped at 4,298 feet, total depth 4,349 feet.

Summit Drilling Co. and others No. 1 Dolezal, SE SE SW section 8-22-1w, wildcat, had first Wilcox sand at 5,135 feet, second sand at 5,200 feet, and was dry and abandoned at 5,254 feet, total depth.

Herndon Drilling Co. No. 1 Baggett, SE cor. section 13-21-3e, wildcat in southeastern Noble County, was moving in material. Phillips Petroleum Co. and Shell Petroleum Corp. No. 4 O'Neil, SW SW SE section 16-23-2w, and Continental Oil Co. No. 5 Conway, SW SE NW section 21-23-2w, were digging cellars. Tide Water Oil Co. No. 5 Shaffer, NE SE SW section 21-23-2w, was a cellar.

Logan County

Royden Oil Co. No. 1 Langston, SE NW SE section 13-17-1w, Langston area, Logan County, topped Wilcox sand at 5,228 feet and was dry and abandoned at 5,257 feet, total depth.

Osage County

Eleven wells were completed in Osage County. Ohio Oil Co. No. 8 Osage, SE NE SW section 36-22-8, plugged back from 580 feet, total depth, to 525 feet, was shot and pumped 243 bbls. of oil and 10 bbls. of water in 24 hours.

Other completions: Midco Oil Corp. No. 26 Osage, NE NW SE section 18-22-10, Chat 1,065 feet, total depth 2,049 feet, plugged back to 1,992 feet, shot, acidized, pumped 60 bbls. of oil daily. Barnsdall Oil Co. No. 22 Osage, NW SE SE section 18-23-12, Bartlesville 1,500 feet, total depth 1,637 feet, shot, pumped 21 bbls. of oil and 2 bbls. of water daily. Sinclair Prairie Oil Co. and Peters Petroleum Co. No. 16 Osage, NW SW NE section 24-24-7, total depth 716 feet, shot, swabbed 15 bbls. of oil daily. Lewis Production Co. No. 4 Osage, SE NE NE section 33-24-7, Bartlesville 2,554 feet, total depth 2,634 feet, shot, flowed 233 bbls. of oil in 24 hours. Wolverine Oil Co. and others No. 48 North Avant Unit, NW SW NE section 31-24-12, Bartlesville 1,632 feet, total depth 1,738 feet, pumped 1 bbl. of oil and 2 bbls. of water daily. Same operators No. 19 North Avant Unit, NW NE SE section 31-24-12, completed as input well at 1,778 feet, total depth.

Sinclair Prairie Oil Co. No. 6 Burbank R, SE NE NE section 21-25-6, Bartlesville 2,709 feet, total depth 2,738 feet, shot, swabbed 200 bbls. of oil daily. W. C. Norris, Inc., No. 8 Osage, SW NE SE section 24-25-8, Osage 1,789 feet, total depth 1,800 feet, shot, acidized, pumped 15 bbls. of oil daily. Link Oil Co. No. 20 Osage, NW SW NW section 34-25-9, Oswego 1,722-48 feet, total depth, acidized, pumped 22 bbls. of oil daily. Bay Oil Corp. and others No. 3 Osage, SW SW SE section 14-26-6, Bartlesville 2,878 feet, total depth 2,954 feet, dry and abandoned.

New work in Osage County: Mason & Carter No. 9 Osage, SE SE NE section 23-21-8, location; Midco Oil Corp. No. 2 Osage, SE SW NE section 18-22-10, spudded; Ray Branstetter No. 6 Osage, SE SW SW section 28-22-11, location; Link Oil Co. No. 9 Ryan, NE section 5-22-12, rigging up; Lewis Production Co. No. 10 Osage, SE NE SE section 28-24-7, and No. 2 Osage, SW NW NW section 33-24-7, and No. 6 Osage, SW NW NE section 33-24-7, locations; Wolverine Oil Co. and others No. 21 North Avant Unit, NW NW SE section 31-24-12, and No. 22 North Avant Unit, SE NE SE section 31-24-12, locations; same operator's No. 50 North Avant Unit, SE SE SE NW section 31-24-12, drilling at 1,224 feet; W. C. Norris, Inc., No. 9 Osage, SE SE NW SE section 24-25-8, digging pits; Midco Oil Corp. No. 1-A Osage, NE SE SW section 35-27-7, location.

Seminole County

Amerada Petroleum Corp. and others No. 1 Wood, SE SE NE section 35-10-7, North Bethel pool, Seminole County, had Cromwell sand at 3,680-86 feet, total depth, and flowed 226 bbls. of oil in three hours, making potential of 1,146 bbls.

Other Seminole County completions: Magnolia Petroleum Co. No. 2 fee, NE NW SE section 24-5-5, Hunton lime 2,392 feet, Sylvan shale 2,574 feet, total depth 2,581 feet, acidized, flowed 38 bbls. of oil gross in two hours, later flowed 30 bbls. net in 24 hours. Paul Traugh No. 1 Dotson, NE SE SE section 26-6-6, sand 2,351 feet, total depth 2,364 feet, plugged back to 2,362 feet, swabbed 135 bbls. of oil in 16 hours, flowed 100 bbls. in 24 hours. Maradun Oil Co. and others No. 1 Herrod, SW SW NE section 3-8-8, total depth 3,453 feet, plugged back to 3,441 feet, dry and abandoned. Amerada Petroleum Corp. and others No. 2 Tilghman, NW NE NW section 2-10-5, Wilcox sand 4,643 feet, total depth 4,649 feet, swabbed 223 bbls. of oil in 11 hours.

First reports of new activity in Seminole County: Devonian Oil Co. No. 1 Roberts, NW NW NE section 27-7-7, location; Lanahan and others No. 1-A Fish, NE SW NE section 19-7-8, cellar and pits; Deep Rock Oil Corp. and Atlantic Refining Co. No. 2 Coody, NW SW SE section 9-9-7, location; Wrightsman Oil Co. No. 1 Taylor, SE SW NE section 35-10-7, building rig.

Pottawatomie County

Magnolia Petroleum Co. No. 2 Engle, SE SE NE section 34-7-4, Pottawatomie County, topped Viola lime at 4,150 feet, Dense 4,205 feet, Dolomite 4,260 feet, total depth 4,301 feet, plugged back to 4,285 feet, acidized, swabbed 231 bbls. of oil gross in 24 hours, and pumped 20 bbls. in 24 hours, completed.

Operations reported in Pottawatomie County for the first time: Shell Petroleum Corp. and others No. 1 Means, SW SW SE section 32-9-3e, cellar and pits; Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 4 Rushing, NW SW SE section 32-11-4, rig; Magnolia Petroleum Co. No. 1 McMoran, SW SW NW section 32-11-5, location.

Coal County

W. A. Delaney and Choctaw Oil & Gas Co. No. 1 Sawyer, SW SE NW section 7-1n-8, Coal County extension of the Jesse area, an old well, was deepened from 4,524 feet to 4,595 feet, plugged back to 4,505 feet, shot and flowed 50 bbls. of oil in 24 hours, recompleted.

Hughes County

Phillips Petroleum Co. No. 2 Simon, NE NW SW section 5-7-8, Hughes County, an old well, was plugged back from 4,219 feet to 4,055 feet, shot and acidized, swabbed and flowed 168 bbls. of oil in 24 hours and was recompleted.

In the Hughes County sector of the Olympic field, Manahan Oil Co. and others No. 2 Oliphant F, NE NE SE section 2-9-8, topped Senora sand at 1,720 feet, total depth 1,737 feet, was shot and pumped 40 bbls. of oil in 24 hours. J. D. Hanna No. 1 Bunner, NE NW NE section 14-9-8, an old well, was plugged back from 1,910 feet to 1,900 feet, shot and pumped 5 bbls. of oil in 24 hours. Linehan and others No. 1-B Norton, SE NW NW section 6-9-10, was dry and abandoned at 1,575 feet, total depth.

Other Hughes County completions: Empire Oil & Refining Co. No. 2 Born B, NE NW SW section 20-7-8, Booch sand 2,874 feet, total depth 2,933 feet, shot and swabbed 70 bbls. of oil daily. Same company's No. 3 Born B, NE SW NW section 20-7-8, was shot and swabbed 192 bbls. of oil in 24 hours from Booch sand topped at 2,863 feet, total depth 2,912 feet. Winona-Jarvis-Holmes No. 3 Harjo, NW SE NW section 20-7-8, Booch sand 2,875 feet, total depth 2,916 feet, was shot, swabbed 240 bbls. of oil daily. Cap Rock Oil Co. No. 1 Parks, SW SW SE section 34-7-8, wildcat, was dry and abandoned at 4,616 feet, total depth, in Wilcox sand. Wrightsman Oil Co. No. 1-A Reed, SE SE NW section 2-8-8, had first Wilcox sand at 4,315 feet, second sand 4,330 feet, total depth 4,363 feet, and was dry and abandoned.

J. F. Smith and others No. 2 Scroggins, NE NW SE section 20-7-8, was a location. W. O. Allen No. 1 Barnard, SW cor. section 24-8-8, was a location.

Okfuskee County

One well was completed in the Okfuskee County sector of the Olympic field at Sinclair Prairie Oil Co. No. 12 Fisher, SW NE SW section 19-10-9. It had Senora sand at 1,796 feet, was bottomed at 1,852 feet, was shot and pumped 25 bbls. of oil in 24 hours.

Okmulgee County

J. L. Selby No. 2-A Grayson, C N half NW NE section 3-14-14, Okmulgee County, had Wilcox sand at 2,190-2,200 feet, total depth, plugged back to 1,250 feet, was shot and pumped 5 bbls. of oil daily.

D. W. Howard No. 3 Trumbo, NW SE NE section 18-14-15, was drilling at 435 feet.

Creek County

Completions in Creek County were as follows: Deep Rock Oil Corp. and others No. 1-A Kimbley, NW NE NE section 15-14-10, pumped 2 bbls. of oil daily after two acid treatments, total depth 3,320 feet. Tibbens No. 7 Yarhola, NW NE SE section 34-15-8, flowed 15 bbls. of oil daily at 2,540 feet, total depth. Sinclair Prairie Oil Co. No. 11 Shoals, SW NE NE section 33-16-9, had a hole full of water and was abandoned at 3,515 feet, total depth. Pure Oil Co. No. 2 Richards, NE SE SE section 4-17-7, had Bartlesville sand at 2,637-2,714 feet, total depth, and averaged 17 bbls. of oil and 30 bbls. of water daily. Sinclair Prairie Oil Co. No. 7 Tucker, NE NE NW section 10-17-7, pumped 52 bbls. of oil and 48 bbls. of water daily at 2,698 feet, total depth. Same company's No. 2 Pressure, SW NW NW section 15-17-7, was completed as a repressure well at 2,778 feet, total depth.

Shaw, Doak & Hughes No. 1 Yarhola, NE cor. section 25-17-7, produced 3,500,000 feet of gas at 1,026 feet, total depth. L. B. Jackson No. 6 Nolan, NW SW NE section 2-17-8, was shot and pumped 8 bbls. of oil and 35 bbls. of water daily at 2,732 feet, total depth. H. F. Wilcox Oil & Gas Co. No. 2 Hope, SW NW SW section 3-17-9, pumped 45 bbls. of oil and 10 bbls. of water daily, total depth 2,087 feet.

L. B. Jackson No. 8 Bear, NE NE SE section 35-18-8, swabbed 5 bbls. of oil daily from Jones sand at 1,605-32 feet, total depth. T. E. Marble No. 4 Tyler, SE NW NE NE section 13-19-7, swabbed 35 bbls. of oil daily after plugging back from 2,345 feet to 2,301 feet and shooting. Big Four Petroleum Co. No. 6 Kizer, SW NE NE section 14-19-7, total depth 2,650 feet, shot, pumped 30 bbls. of oil daily. Sinclair Prairie Oil Co. No. 2 Oates, SE SE NE section 14-19-9, total depth 1,303 feet, pumped 25 bbls. of oil daily.

A Gas Producer

Big Four Petroleum Co. No. 1 Cubby, NW cor. section 30-17-8, Bruner sand 1,035-64 feet, total depth, produced 3,500,000 feet of gas, estimated. C. O. Buckles No. 8 Frailey, SE NW SE section 22-18-8, total depth 1,340 feet, dry and abandoned. Johnson Oil Refining Co. No. 7 Flinchum, NE SW NE SW section 11-19-9, Bartlesville sand 2,160-72 feet, total depth, dry and abandoned. A. W. Swift and others No. 1 Hayden, NE SW SW section 12-19-9, Cleveland sand 1,200-28 feet, total depth, plugged back to 1,216 feet, shot, flowed 180 bbls. of oil in 24 hours. J. P. Brady & Sons No. 3 Duncan, SW NE NE section 19-19-9, total depth 2,450 feet, pumped 75 bbls. of oil daily.

New work in Creek County: Curtis Oil Co. No. 2 Grayson, NW SE SE section 20-18-9, digging cellar; Sparton Supply Co. No. 3 Nichols, CEL SE NE section 12-18-11, drilling at 175 feet; Sinclair Prairie Oil Co. No. 3 Oates, SE SW SE NE section 14-19-9, spudded; J. P. Brady & Sons No. 4 Duncan, NW SE NE section 19-9-9, location; Gulf Oil Corp. No. 1 Jemima, SW SW NE sec-

(Continued on Page 115)

W-K-M

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North Louisiana, Arkansas

RODESSA MAY BE TRI-STATE FIELD; OUTPOST SHOWS OIL

By
MITCHELL TUCKER

SHREVEPORT, La., June 21.—Important developments in Arkansas held the center of interest for the third consecutive week in the Ark-La-Tex area. After coring 14 feet of saturated sand in the Rodessa extension test across the line into Arkansas, this field gives promise of being the first tri-state reservoir ever developed. One large completion and four new locations were recorded in the fast developing Schuler field, bringing total producers to three, daily average production to about 2,200 bbls., with nine wells rigging up or spudding and six wells drilling.

RODESSA—ARKANSAS

McClanahan and others No. 1 A. A. Capps, NW SE SW section 11-20-28, Miller County, Arkansas, situated about 2 miles north of present Rodessa, Louisiana, production, drilled the massive anhydrite from 5,510 to 5,764 feet, topped the Hill gas sand at 5,903 feet, the Gloyd sand at 6,020 feet, and drilled the saturated Mitchell oil sand from 6,084 to 6,098 feet. The 7-inch casing was set above the Gloyd at 6,016 feet, and at a total depth of 6,113 feet preparations are being made to drill plug and test.

This well lies in what is generally referred to as the north extension of the Rodessa field, north of a parallel fault running from Cass County, Texas, through the edge of Louisiana into Arkansas. At present wells north of the parallel fault include one in the John Collom and G. Crowder surveys of Texas, and sections 4 and 9, Township 23, Range 16, Caddo Parish, Louisiana. This 2-mile extension along the fault is expected to prompt rapid development, especially across the Arkansas line where there is no proration of production, and where Arkansas officials have stated there will be no proration.

RODESSA—LOUISIANA

Three completions were recorded last week in the Louisiana portion of the North Rodessa area, where production has been extended into the state of Arkansas. Production is from the Mitchell sand, which normally occupies a position comparable to the Lower Gloyd. Standard Oil Co. of Louisiana made two of the completions, and R. W. Norton of Shreveport the other. Total initial production of the three wells amounted to 2,400 bbls., bringing Louisiana Rodessa wells to a total of 380.

United Gas Public Service Co. No. 5 Young, NW of section 27-23-16, situated sufficiently high on structure to produce gas only, was completed with an official gauge of 50,000,000 feet open flow, 1,885 pounds rock pressure, total depth 5,651 feet. Formerly this well had been deepened to a depth of 6,790 feet for a thorough exploration of the Pettit and Upper Travis Peak zones.

Blackwell Oil & Gas Co. is deepening No. 3 Beugent, section 8-23-16, in the northeast end of the field. It was formerly completed at 6,074 feet as a small gas and distillate producer in the Gloyd formation. When deepened the Young Oolitic lime was topped at 6,154 feet and drill-stem test at 6,161 feet showed salt water only. Drilling continues below 6,240 feet.

RODESSA—TEXAS

Six oil wells and one gas well were completed in the Texas side of the Rodessa field.

The Texas Co. completed No. 8 McLeod, W. A. Elliott Survey, as a gasser, gauging 51,000,000 feet on open-flow test, rock pressure 1,850 pounds, total depth 6,111 feet.

Most recent bottom-hole pressure surveys conducted by engineers of the Texas Railroad Commission showed that 60 wells in the Texas side of the field suffered a decline in pressure over the last 60 days. The drop ranged from .08 pounds daily to as high as 10.29 pounds per day, with the average daily drop placed at 2.79 pounds. Wells with the greatest drop were said to be in the most thickly drilled section of the field near the gas-oil contact.

Bossier Parish

In the Bellevue field, Premier Investment Co. No. 10 Weaver, section 14-19-11, a completion, pumped 40 bbls. daily, total depth 397 feet.

Caddo Parish

Three completions were made in the Caddo-Pine Island area last week, having an aggregate initial production of 115 bbls. Custer Oil Co., Paul Cooper and Stanolind Oil & Gas Co. each completed one producer.

W. J. Hunter's closely watched Keithville test about 15 miles south of Shreveport has carefully cored and drilled the Lower Glen Rose formation without reporting any attractive showings. The Pettit lime (Basal Glen Rose) was topped at 5,990 feet but found to be hard and dry. Operators have set 7-inch casing on bottom, total depth 6,012 feet and are moving out heavy rig. They plan to move in light-duty outfit for testing.

Claiborne Parish—Lisbon

Total accumulated production from the Lisbon field, not quite six months old, is now 370,000 bbls. The greater part of this production was made during the last 60 days following the rapid completion of new producers. After making three completions in the field last week, having an aggregate total initial flow of 2,345 bbls., the total Lisbon producers now number 39.

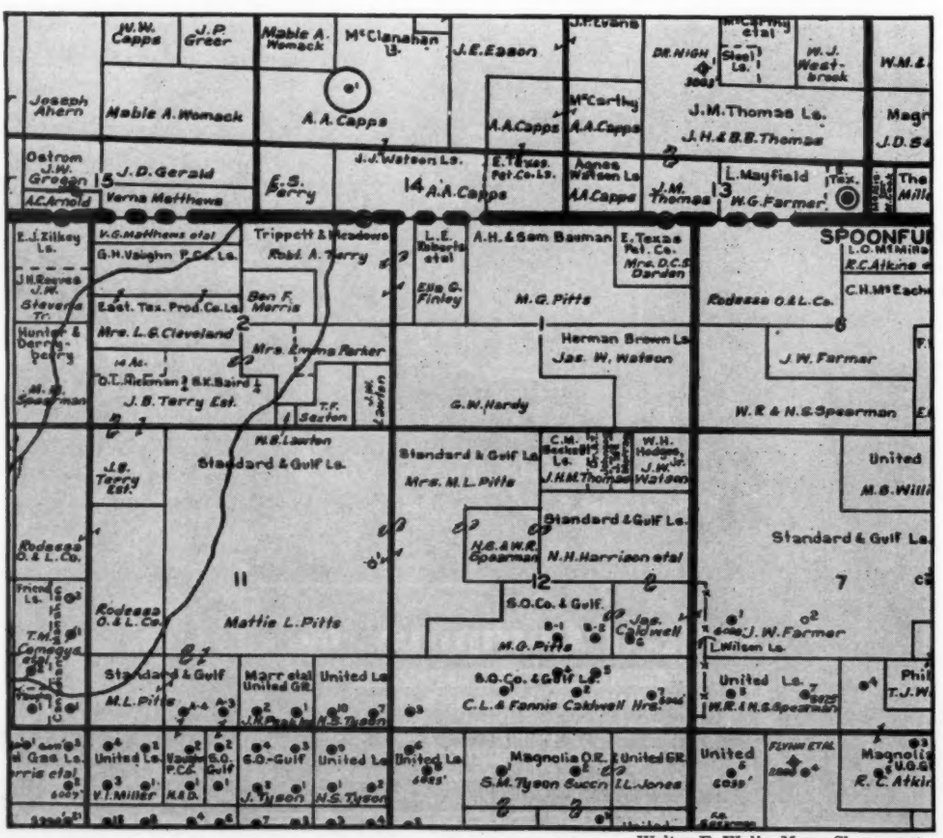
Atlantic Refining Co., Standard Oil Co. of Louisiana and Scouts Oil Co. all made one completion each. The No. 1 F. B. King, SE SE NE of section 35-21-5, completed by Standard of Louisiana, was the most important in that it indicated a thickening of saturated lime to the northwest, with increasing gas pressure. Heretofore some properties in that direction had been considered questionable producers. On initial test the King completion flowed 65 bbls. hourly through 1-inch tubing choke after acidizing, tubing pressure 125 pounds, with gas estimated at 500,000 feet daily.

Gulf Refining Co. is preparing to test No. 1 Henry, S half NW NE section 31-21-4, outpost well in the field northeastward, which from all indications promises to be the field's best producer to date. Saturated Pettit was cored from 5,194 to 5,210 feet and from 5,211 to 5,213 feet, which also indicates a thickening of the saturated lime to the northeast.

With these recent developments in both directions northward, more weight is being given the early theory that present Lisbon production is upon the southern flank of a large structure.

Lincoln Parish

Glassell & Glassell No. 1 Gray, important wildcat



Walter E. Wylie, Maps, Shreveport.

McClanahan and others No. 1 A. A. Capps, NW SE SW section 11-20-28w, Miller County, Arkansas, two miles north of present production in the Rodessa field, which cored 14 feet of saturated Mitchell sand at 6,084-98 feet

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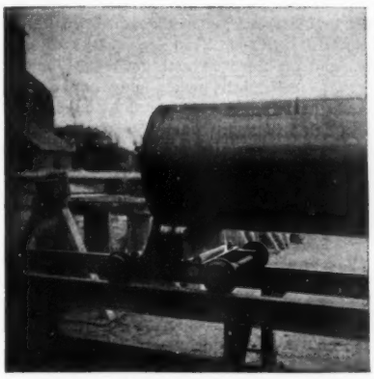

20″ coated pipe emerging from coating machine.

Coated pipe after delivery to field and before unbonded wrapper was applied.

20″ pipe showing coated coupling and wrapping on pipe over 70B Bitumastic Enamel.

These Desirable Features Will Appeal To You

1. *Our own men apply our own coating with our own machine.* One undivided responsibility for all the coating work (yard and field) assumed by the only manufacturer whose products have been made long enough to *prove* their dependability.

2. "Production line" technique is used in coating pipe for the first time. A yard shop is set up, eliminating entirely the hazards of field conditions and minimizing delay due to weather conditions.

3. The machine applies hot Bitumastic Enamel *consistent in thickness* without waste, drips, runs or festoons.

4. It is adaptable—handling pipe up to 30″ O. D.

5. It is versatile—applying the coating alone, or with a single or double felt, or with a ¼″ thickness of Cem-Wrap cement mortar *in one continuous operation.*

On this Northern Natural Gas job, Bitumastic 70B Enamel was applied to the pipe in the yard without wrapping. The coated pipe was easily transported to the right-of-way without appreciable damage to the coating. We then completed the field coating with our own field crew. Then an unbonded asbestos wrapper was applied.

6. The work is fast—supplying pipe well in advance of laying needs.

7. The job is thorough. Coating field joints is also included in our contract. An electric "holiday detector" assures perfect application and makes certain that the coating is intact and free from damage when the pipe line is back filled.

The development of this machine-coating method completes the chain of our service: 1. The manufacture of Bitumastic products of all types for every pipe coating need and condition; 2. Contract work on application of these coatings to any size pipe up to 30″ O. D.; *and now,* 3. Setting up yard shops *anywhere* for the modern method of machine-coating. Prices are strictly competitive.

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test on a geophysically mapped structure near Dubach, section 16-20-3w, cored and drilled through the Pettit lime without logging attractive showings. Drilling continues below 5,280 feet.

H. D. Easton and Belmont Quadrangle Drilling Co. No. 1 G. W. Dye, NE NE section 21-19n-4w, wildcat test upon the North Simmsboro structure, is being closely watched as it topped the first massive anhydrite at 4,215 feet, went out of it into shale and lime at 4,204 feet and back into solid massive anhydrite at 4,255 feet. Drilling continues below 4,512 feet in anhydrite.

Monroe Gas Field

Five routine completions were made in the shallow Monroe gas field of Morehouse, Ouachita and Union parishes last week, having a total initial production of 50,000,000 feet, average rock pressure 850 pounds.

Webster Parish

The Louisiana Department of Conservation has announced that public hearing will be held on the proposed 150-acre spacing rule for the deep development of the Cotton Valley gas-distillate field. The hearing will be held within the next two weeks in Shreveport, at which time land owners and royalty holders of that area will be given an opportunity to voice their strong objections which have been aired in recent local meetings in the field.

Red River Parish

Gulf Refining Co. No. 41 E. T. Robinson, NW section 25-13-11, was a completion in the Bull Bayou field, pumping 62 bbls. daily, total depth 2,553 feet.

ARKANSAS

Columbia County

Negotiations are now under way for the drilling of an 8,000-foot test in section 8-18-22 upon Superior Oil Co.'s extensive block southwest of Magnolia. Recent developments in the Schuler field, where prolific oil production has been found in the Lower Marine Trinity, have stimulated interest again in this area.

Little River County

Joe Strahan No. 1 Dierks, SW SE section 21-12-28, has been junked and abandoned at a total depth of 2,354 feet.

Miller County

E. H. Moore, Inc., No. 2 Dale, section 24-15-26, on northeast flank of the Garland City field, is fishing for drill stem at 6,079 feet as the week closed. Travis Peak was topped at 4,654 feet and operators propose to carry this hole to the Permian lime and possibly deeper.

Nevada County

Benedum & Trees No. 1 Grove, section 10-14-20, deep test in the shallow Troy field, went out of what was considered the Permian lime at 5,394 feet and topped the salt beds at 5,735 feet. Drilling continues below this depth.

Union County—Schuler

Alice-Sydney Oil Co. (Dr. J. S. Rushing and others) No. 1 Morgan, NW NE SE section 18-18-17, was the third completion in the fast developing Schuler field, flowing on first 24-hour gauge through open 2¼-inch tubing a total of 1,540 bbls., on second 24-hour gauge 1,052 bbls., and on third 24-hour gauge 934 bbls., 21 hours through one-eighth inch tubing choke and 3 hours through open tubing. Production is from 5,548-71 feet, through which section the 7-inch casing was perforated with 86 shots. Casing pressure was 600 pounds, gas volume 2,070,000 feet.

Lion Oil Refining Co. No. 1-B Edna Morgan, SW NW SE section 18-18-17, is to be tested early next week and promises to be the best producer yet drilled at Schuler. Topping first saturation at 5,532 feet, this hole was carefully cored and drilled to a total depth of 5,827 feet, through which section a total of 86 feet of fully saturated and porous oil sand was logged. In the last core from 5,823 to 5,827 feet, 3 inches of lignite was recovered. The 7-inch casing has been cemented on bottom and hole will be selectively completed soon.

Four new locations were staked at Schuler last week, two of which will afford 1-mile extensions, one to the west and the other to the south.

EAST TEXAS (Border Counties)

Bowie County

The Balcones fault in western Bowie County is scheduled for another deep test soon by A. D. Hudspeth and others in the W. G. Williams Survey, about 32 miles west of Texarkana. Contract calls for a 6,200-foot test.

Shelby County

Considerable interest is being shown in Redditt & Gray No. 1 Pickering Lumber Co. in the English Survey of Shelby County, where operators reported coring about 17 feet of saturated oil-bearing Pettit lime above the present total depth of 4,109 feet. The 7-inch casing has been set at 4,079 feet, preparatory to testing.

Estimated Daily Production

Estimated daily gross production all companies week ending June 18, 1937:

NORTH LOUISIANA

	Bbls.
Bellevue	775
Caddo light	4,015
Caddo heavy	2,530
Converse	800
Cotton Valley heavy	255
Cotton Valley light	*2,525
DeSoto and Red River	1,585
Elm Grove	345
Haynesville	3,105
Holly	130
Homer	2,520
Lisbon	7,800
Pleasant Hill	135
Rodessa	48,565
Sarepta-Carterville	365
Sligo	450
Sugar Creek	125
Urania	2,850
Zwolle	765
Total	79,640

SOUTH ARKANSAS

Champagnolle	1,520
El Dorado	2,030
Lisbon	290
Miller County	510
Nevada	765
Schuler	1,710
Smackover light	2,150
Smackover heavy	16,960
Stephens	656
Troy	870
Urbana	1,260
Total	28,630

Texas side of Rodessa field, 35,205 bbls. daily.

*2,055 bbls. is distillate.

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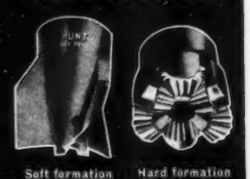
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Among Gulf Coast Drilling Contractors

Pat R. Rutherford drilled the well that opened a deeply seated type of field, 2½ miles southwest of the Buckeye field in Matagorda County for United North & South Development Co. No. 1 Stoddard. This makes the second field opened in Matagorda County by a well drilled by Mr. Rutherford. His first discovery was at Van Vleck, where he completed 22 producing wells for the Skelly Oil Co. and is preparing to make a production test for that company at No. 2 W. P. Johnson.

Smith & McDannald are preparing to spud an important wildcat in the Willis area, Montgomery County, for the Texas Co. The well is located on the Lelis Crawford lease in the V. Springer Survey. Much attention has been attracted to the area due to three tests that showed considerable gas in the Cockfield sand. In the meantime activity is being carried on by the firm with 10 rigs, two of which are located in the Hastings field for Stanolind Oil & Gas Co., three at the Long Beach field for the Tide Water Oil Co., two at Dickinson for the Pure Oil Co. and Pan American Production Co., one at Louise for Pure Oil Co. and one at St. Martinsville for the Tide Water Oil Co. The other rotary is on a wildcat prospect, known as Mowata, in northern Acadia Parish, which is being drilled for themselves and others.

Glenn H. McCarthy, who is drilling his No. 2 Foley in the recently discovered Palacios field in Matagorda County, reached a depth of 8,068 feet and progress has been retarded due to mechanical trouble. His No. 6 Longe at Amelia resulted in a good producer and he is rigging up for No. 3-B Longe. Two rotaries are running in the same field for the Humble Oil & Refining Co.

Rowan Drilling Co. has moved two rigs to the Amelia field for the Humble Oil & Refining Co. and is drilling below 5,600 feet for the Tide Water Oil Co. at the Venice Salt dome in Plaquemines Parish. Two rigs are waiting on locations at the Fairbanks and Tomball fields in Harris County.

Nicklos Drilling Co. is operating two rigs in the Tepetate field for the Continental Oil Co. and is preparing to test two wells at the Valentine field in Lafourche Parish for the Pan American Production Co.

Edwards Drilling Co. is operating two rigs at Amelia for the Humble Oil & Refining Co. Harry L. Edwards has one rig running in the Dickinson field for the Turman Oil Co. and is scheduled to move another to a new location this week.

H. J. Dearman has spudded No. 1 Broussard, a wildcat in Jefferson County, for H. B. Hebert and others. It is located on the Broussard lease in the J. W. McGaffey Survey.

C & C Drilling Co. has spudded Carlton & Schwab's wildcat in Jefferson County, has one rig running at Hastings and has reached the sand for H. M. Naylor in the Thompson field.

Cron & Gracey are making preparations to make a production test of Fohs Oil Co. No. 1 State Long Lake in Lafourche Parish. The well is bottomed in oil sand at 9,406 feet and 7-inch casing has been cemented on bottom. In the meantime operations are progressing at Hackberry, South Houston, and Hastings for the Stanolind Oil & Gas Co., while two outfits are located at the Placedo for the Shell Petroleum Corp. and at Flour Bluff for Humble Oil & Refining Co.

George Echols is drilling below 5,200 feet on Cockburn, Hargroves & Echols' No. 1 LaWard in Jackson County, while at Heyser Echols No. 5 Bennett is below 2,250 feet. Two string of tools are located for the Fohs Oil Co. at the Gillis and Jefferson fields.

Drilling crew on a Humble Oil & Refining Co. well in the Dickinson field. They are E. E. McDougal, K. C. Shawver, P. P. Bozeman, drillers; E. S. Jackson and R. R. Alworth

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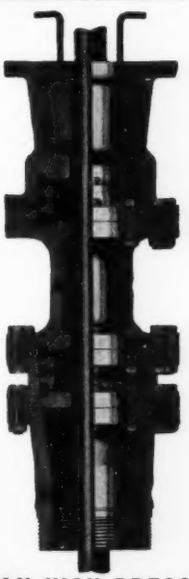

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Rocky Mountain Area

By
T. R. INGRAM

BEST WELL OF THE WEEK IS 13,000-BBL. GUSHER IN HOBBS

DENVER, Colo., June 21.—The northern Rocky Mountain area had few outstanding developments during the week.

NEW MEXICO

The largest producer completed the past week in New Mexico was Stanolind Oil & Gas Co. No. 30-X Thorpe, C W half SW NE section 10-19-38, Hobbs field. Top of pay was 4,152 feet; total depth 4,201 feet. After acidizing, it flowed 13,673 bbls. of oil in 24 hours through open casing and tubing. Gas measured 9,293,000 feet daily.

Other Lea County completions: Texas Co. No. 2 Saunders Permit, flowed 222 bbls. of oil in 6 hours, initially. Top of pay was 3,885 feet; total depth 4,010 feet.

Stanolind Oil & Gas Co. No. 2 Meyers, SW cor. section 4-24-37, had pay at 3,524 feet, total depth 3,570 feet, and flowed 155 bbls. of oil daily through choke. Same company's No. 1 McQuatters, C NE NE section 11-21-36, had pay at 3,820 feet and was bottomed at 3,847 feet. It pumped 92 bbls. of oil in 18 hours, cutting 25 per cent basic sediment and water. The company's No. 2-A Gilluly, C NE NE section 24-20-36, was acidized and flowed 24 bbls. of oil hourly through choke, from pay topped at 3,788 feet, total depth 3,872 feet.

Repollo Oil Co. No. 5 Byrd, NW SW NW section 11-20-36, flowed 672 bbls. of oil in 24 hours at total depth of 3,900 feet.

Phillips Petroleum Co. No. 2 Hobbs, C NW SW section 18-20-37, had pay at 3,766 feet, total depth 3,865 feet, flowed 17 bbls. in one and one-half hours; was acidized, reacidized and flowed 505 bbls. in 10 hours.

Humble Oil & Refining Co. No. 1-G State, C NW NW section 23-21-36, pumped 64 bbls. of oil in 24 hours from pay at 3,797 feet, total depth 3,860 feet.

Gulf Oil Corp. No. 5 White, C NE NE section 25-20-36, had pay at 3,870 feet, total depth 3,855 feet, was acidized and flowed 144 bbls. of oil in 12 hours. Same operator's No. 3 White, C SE NE section 25-20-36, flowed 90 bbls. of oil in 6 hours through tubing from pay topped at 3,765 feet, total depth 3,850 feet. The company's No. 1 Westfall, SE SW SE section 15-25-37, found pay at 3,295 feet, was bottomed at 3,375 feet and flowed 104 bbls. of oil in 24 hours through tubing. Same company's No. 8-C Orcutt, C NW NE section 6-21-36, had pay at 3,740 feet, total depth 3,855 feet, and flowed 90 bbls. of oil in 6 hours.

Continental Oil Co. No. 1-C-16 State, C SW NW section 16-20-37, flowed 15 bbls. of oil an hour through choke from pay found at 3,810 feet, total depth 3,830 feet.

El Paso Natural Gas Co. No. 1 Camp, C SW SW section 6-24-37, produced 10,000,000 feet of gas from pay at 3,270 feet, total depth 3,656 feet, plugged back to 3,505 feet.

Amerada Petroleum Corp. No. 2-B Weir, C SE NW section 26-19-36, topped pay at 3,890 feet, total depth 4,021 feet, was acidized and flowed 38 bbls. of oil an hour through choke. Same operator's No. 1-Q State, C W half NW SE section 16-20-37, found pay at 3,795 feet, total depth 3,870 feet, and flowed 26 bbls. of oil an hour, cutting 24 per cent water.

Skelly Oil Co. No. 5 Van Etten, C NW SE section 9-20-37, flowed 796 bbls. of oil in 4 hours from pay found at 3,840 feet, total depth 3,875 feet.

Empire Oil & Refining Co. No. 3-A Clossen, SW SW NE section 6-22-36, topped pay at 3,785 feet, total depth 3,830 feet, and flowed 504 bbls. of oil in 24 hours.

Atlantic Refining Co. No. 2-O State, C NW NW section 32-20-37, flowed 28 bbls. of oil an hour from pay at 3,788 feet, total depth 3,840 feet.

Three wells in Eddy County were completed. Neil H. Wills and others No. 1 Morris-Hoover, C SW NW section 20-20-30, found pay at 1,458 feet, total depth 1,461 feet, was acidized and swabbed 200 bbls. of oil a day.

Republic Production Co. No. 7 Russell A, NW SE NW section 18-17-31, topped pay at 3,440 feet, total depth 3,535 feet, was shot and acidized and pumped 93 bbls. of oil daily.

Murchison & Closuit No. 1-B State, C NW SE section 16-17-31, had pay at 3,653 feet, total depth 3,707 feet, plugged back to 3,704 feet when sulfur water intruded at total depth, was acidized and pumped 120 bbls. of oil daily.

Monument Area

Amerada Pet. Corp. No. 3 Laughlin, C NW NE sec. 9-20-37. T.D. 3,780 ft.
Continental Oil Co. No. 18-B-5 Britt, C SW SW sec. 18-20-37. T.D. 3,877 ft.; testing.
Ohio Oil Co. No. 2 State-Hansen, C W½ SW NE sec. 16-20-37. Drlg. 3,319 ft.
Amerada Pet. Corp. No. 4-T State, sec. 25-19-36. T.D. 4,055 ft.; tstg. oil and gas.
Gulf Oil Corp. No. 4-F Bell-State, sec. 36-20-36. Drlg. 600 ft.
Phillips Pet. Co. No. 3 Hobbs, SW sec. 18-20-37. T.D. 3,770 ft.; set 7-in. at 3,760 ft.
Sun Oil Co. No. 1 Barr, SW sec. 24-19-38. T.D. 4,007 ft.; swabbed 5 bbls. oil per hour; may deepen.
Tide Water Oil Co. No. 2-J State, C NW NW sec. 17-19-37. T.D. 4,000 ft.; W.O.C.
Atlantic Ref. Co. No. 2-O State, NW sec. 32-20-37. T.D. 3,780 ft.; show oil and gas.
Gulf Oil Corp. No. 1 Butler, SE sec. 19-20-37. T.D. 3,850 ft.; testing.
Tide Water Oil Co. No. 1-K State, SW sec. 13-20-36. Loc.
Repollo Oil Co. No. 4-B Phillips, NW SW NW sec. 31-19-37. Drlg. 1,120 ft.
Shell Pet. Corp. No. 3-E State, C SE NW sec. 13-20-36. Set csg. 1,020 ft.
Humble O. & R. Co. No. 1 Fopeano, C SE SW sec. 25-20-36. Drlg. 2,735 ft.
Ohio Oil Co. No. 3 State-Hanson, C W½ NE NE sec. 16-20-37. Cellar.
Continental Oil Co. No. 2 Sanderson B-10, NE SE NE sec. 10-20-36. Loc.
Repollo Oil Co. No. 6 Byrd, NE NW SW section 11-20-36. R.U.R.
Texas Co. No. 1 Keohane, C NE NE sec. 18-19-37. R.U.R.
Cranfill & Germany No. 1 Weir, C NE NE sec. 15-20-37. Drlg. 4,131 ft.
Empire O. & R. Co. No. 1 Parsons, C SE SE sec. 27-19-36. Loc.
Gulf Oil Corp. No. 1 Shipp, C SE NW sec. 21-19-37. Drlg. 1,300 ft.
Gulf Oil Corp. No. 2 Gramm-State, C NW SE sec. 17-19-37. Spudded.
Texas Co. No. 11 Lieu Lands, C NW NW sec. 20-20-37. Drlg. 2,783 ft.

Chaves County

English & Harmon No. 1 Billingslea, SE sec. 9-15-29. T.D. 2,747 ft.; S.D. repairs.

Eunice Area

Gulf Oil Corp. No. 1 Bell-Ramsey B, C SW SW sec. 29-20-37. T.D. 3,840 ft.; C.O.
Tide Water Associated Oil Co. No. 1 Marshall, C SW NE sec. 13-21-36. T.D. 4,005 ft.; S.D. for orders.
Gulf Oil Corp. No. 4 Campbell, sec. 7-21-36. Drlg. 3,110 ft.
Empire O. & R. Co. No. 1-G State, sec. 2-21-36. T.D. 3,900 ft.; S.D.
Gulf Oil Corp. No. 5 Collins, sec. 14-21-36. Drlg. 3,400 ft.
Humble O. & R. Co. No. 2-G State, C NE NW sec. 23-21-36. Drlg.
Stanolind O. & G. Co. No. 1 Hill, C Lot 16, sec. 5-21-36. T.D. 3,555 ft.; R.U.S.T.
Republic Prod. Co. No. 1 State, SE sec. 12-21-35. Drlg. 3,555 ft.
Magnolia Pet. Co. No. 4 Carson, SW sec. 28-21-37. Drlg. 2,865 ft.
Gulf Oil Corp. No. 3 King, NW sec. 28-21-37. Drlg. 2,780 ft.
Stanolind O. & G. Co. No. 2 McQuatters, C NW NE sec. 11-21-36. Drlg. 2,150 ft.
Continental Oil Co. No. B-30-1 Lockhart, C SE SW sec. 30-21-36. R.U.R.
Gulf Oil Corp. No. 1-D Janda, C NW SW sec. 2-21-36. Drlg.

Dona Ana County

Juels C. Bertrand No. 1 Casad Permit, sec. 24-26-5e. T.D. 47 ft.; S.D.O.

Hobbs Area

Stanolind O. & G. Co. No. 8 Terry, C NW SE sec. 9-19-38. Loc.

Sims Area

Gulf Oil Corp. No. 1 Davis, sec. 8-23-27. T.D. 3,712 ft.; P.B. 3,702 ft.; C.O.
J. E. Farrell No. 2-B Walden, C NE SW sec. 15-22-37. T.D. 3,465 ft.; drlg. by.
J. E. Farrell No. 2-C Walden, C SE SW sec. 15-22-37. Drlg. 3,665 ft.
Empire O. & R. Co. No. 2 Walden, sec. 21-22-37. T.D. 3,610 ft.; C.O.
Skelly Oil Co. No. 5 R. R. Sims, sec. 3-23-37. T.D. 3,410 ft.
Tide Water Oil Co. No. 3 Walden, sec. 21-22-37. Drlg. 3,589 ft.
Skelly Oil Co. No. 3 R. R. Sims, sec. 4-23-37. T.D. 3,670 ft.; lost shot in hole.
Amerada Pet. Corp. No. 1 Corrigan, SW SW NE sec. 4-22-37. Drlg. 2,809 ft.
Rowan Drlg. Co. No. 1 Walden, C NW NW sec. 15-22-37. Drlg. 3,095 ft.
Gulf Oil Corp. No. 1 Baker, C SE SE sec. 5-22-37. T.D. 3,440 ft.; set 5½-in. at 3,423 ft.
Skelly Oil Co. No. 3 H. O. Simms, NW sec. 3-23-37. Drlg. 2,581 ft.
Rowan Drlg. Co. No. 1-A Elliott, SW sec. 27-22-37. T.D. 1,170 ft.; standardizing.
Gulf Oil Corp. No. 1 Monda, C SE SW sec. 21-22-37. T.D. 1,225 ft.; straightening hole.
W. H. Street No. 2 Wood, C SW NE sec. 22-22-37. Drlg. 40 ft.
Gulf Oil Corp. No. 3 Cole, C SE NE sec. 16-22-37. Drlg.
Gulf Oil Corp. No. 2 Cole, C NE NE sec. 16-22-37. T.D. 1,141 ft.; running csg.
Mid-Continent Pet. Corp. No. 1 Owen, C NW NW sec. 3-22-37. Drlg.
Rowan Drlg. Co. No. 2 Walden, C NE NW sec. 15-22-37. Drlg.
Skelly Oil Co. No. 2-B Harrison, C NW NW sec. 9-23-37. Drlg.
Skelly Oil Co. No. 3 G. W. Sims, C NW NE sec. 9-23-37. Cellar and pits.
Skelly Oil Co. No. 1-B Harrison, C NE NW sec. 9-23-37. Drlg. 2,529 gt.

Lea County—Miscellaneous

Brown & Reynolds No. 1 Parcell, C NW SE sec. 8-21-38. Wildcat; T.D. 4,397 ft.; P.B. 4,386 ft; testing.
Amon G. Carter No. 2 Elliott, C NE SW sec. 22-22-37. T.D. 3,622 ft.; C.O.
Magnolia Pet. Co. No. 1 State G, NW NW NE sec. 24-17-34. T.D. 4,905 ft.; P.B. 4,794 ft.; C.O.; shot at 4,615,-72 ft.
Continental Oil Co. No. 1 Wantz, C SW SW sec. 21-21-37. T.D. 3,872 ft.; F. 24 bbls. oil; shut in.
Samedan Oil Co. No. 3 Hughes, sec. 4-23-27. T.D. 3,631 ft.; flowed 25 bbls. per day.
Anderson-Prichard Oil Corp. No. 1 Wells, C SE SE sec. 5-25-37. Drlg. 3,057 ft.
Herschback et al No. 1 Alston, C SW NE sec. 31-17-37. Drlg. 5,185 ft.
Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. T.D. 3,870 ft.; drlg. out bridge.
Stanolind O. & G. Co. No. 3 Meyers, SE sec. 4-24-37. Drlg.
Gulf Oil Corp. No. 1 Boyd, sec. 23-22-37. T.D. 3,681 ft.; testing.
Maljamar O. & G. Co. No. 3 Mitchell, C SE NE sec. 20-17-32. Drlg. 2,780 ft.
Texas Co. No. 1 Fristoe, C SW NW sec. 35-23-37. T.D. 3,531 ft. Testing.
Magnolia Pet. Co. No. 1 Hanna, sec. 7-26-38. Wildcat; drlg. 3,010 ft.
Gulf Oil Corp. No. 1 Knight, sec. 27-24-37. T.D. 3,574 ft.; swabbing.
Landreth Prod. Co. No. 2 Grizzell, sec. 5-22-37. T.D. 3,425 ft.; W.O.C.
Magnolia Pet. Co. No. 3 Cary, sec. 21-22-37. Drlg. 3,335 ft.
Repollo Oil Co. No. 1 Fowler, sec. 9-24-37. Drlg. 3,507 ft.
Schermerhorn Oil Co. No. 1 Woolworth, C NW NE sec. 28-24-37. Drlg. 3,065 ft.
Continental Oil Co. No. 1 Burger, C NW SW sec. 19-20-38. T.D. 3,872 ft. Testing.
Culbertson-Irwin et al No. 1 Moseley, SE NE SW sec. 34-24-37. T.D. 2,250 ft.
Continental Oil Co. No. 1-A-15 Cline, NW sec. 15-23-37. Wildcat. Drlg. 2,365 ft.
Repollo Oil Co. No. 2 Christmas, sec. 28-22-37. Drlg. 2,310 ft.
Repollo Oil Co. No. 1 Turner, sec. 29-21-37. Drlg. 1,895 ft.
Shell Pet. Corp. No. 1 Rinewalt, NW sec. 4-22-37. T.D. 3,330 ft. Fishing.
F. J. Danglade No. 1 Christmas, C SE NE sec. 5-22-37. Drlg. 3,621 ft.
Devonian Oil Co No. 2 Christmas, SE sec. 28-22-37. Cellar and pits.
Devonian Oil Co. No. 3 Christmas, C SW SE sec. 28-22-37. Cellar and pits.
Magnolia Pet. Co. No. 4 Cary, C SW SW sec. 21-22-37. Derrick.
Texas Pacific Coal & Oil Co. No. 4-A State, C SW SW sec. 9-22-36. Drlg. 2,982 ft.
Texas Co. No. 2-A Rhoades, SE NW SE sec. 22-26-37. Drlg. 3,222 ft.
Stanolind O. & G. Co. No. 1 Turner, C NW NW sec. 20-20-38. Drlg. 3,874 ft.
Ajax Drlg. Corp. No. 1 Lanehart, SW sec. 21-25-37. Rigging up machine.
Culbertson & Irwin No. 1 Boesche, NE sec. 2-21-32. Wildcat. T.D. 355 ft. S.D. for repairs.
Gulf Oil Corp. No. 2 Westfall, SE sec. 15-25-37. Drlg. 3,085 ft.
Jal Natural Gas Corp. No. 2 Justis, NE sec. 20-25-37. Drlg. 1,375 ft.
Mid-Continent Pet. Corp. No. 2 Greer, NW sec. 21-22-36. Drlg. 3,575 ft.
Plains Prod. Co. No. 1 Humphreys, NE sec. 3-25-37. Loc.
Texas Co. No. 2 Lea, NE sec. 15-20-34. Drlg. 1,490 ft.
Tide Water Oil Co. No. 1 Day, C NE NW sec. 6-22-36. T.D. 3,260 ft. Set 7⅝ in. at 3,259 ft.
Continental Oil Co. No. A-5-2 Farney, C NE SE sec. 5-23-36. Drlg. 1,495 ft.
Western Gas Co. No. 3 Harrison, C NW SW sec. 20-24-37. T.D. 311 ft. Set 12½ in. csg.
Repollo Oil Co. No. 3 Jamison, SW NE NE sec. 21-24-37. T.D. 240 ft. Set 12½ in. at 238 ft.
Sun Oil Co. No. 3 Stuart, C NE NE sec. 15-25-37. Drlg. 2,735 ft.
Shell Pet. Corp. No. 4-M State, C Lot 15, sec. 1-21-35. 8 in. csg. 1,340 ft.

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Ohio Oil Co. No. 2 Turner, SW NW SE sec. 29-21-37. Drlg. 285 ft.
Humble O. & R. Co. No. 1 Williams, C SE NE sec. 34-24-37. Loc.
Continental Oil Co. No. 1 Jack, C NW NE sec. 27-24-37. Loc.
Empire O. & R. Co. No. 4 Clossen A, C SE SE sec. 6-22-36. Cellar and pits.
Continental Oil Co. No. 1 State, C SW NW sec. 16-22-36. Loc.
J. W. Brown No. 1 State, C SW SW sec. 22-21-24. T.D. 85 ft.; S.D. for csg.
Continental Oil Co. No. 1 Ailes, C SE SE sec. 35-20-38. T.D. 1,652 ft.; set csg.
Continental Oil Co. No. 1-A-17 Lockhart, C NW SW sec. 17-21-37. T.D. 1,430 ft.; running csg.
Continental Oil Co. No. 1 Stevens, C SW NW sec. 34-23-36. Drlg. 120 ft.
Culbertson & Irwin No. 1 Humphreys, NE NW NE sec. 3-25-37. Drlg. 540 ft.
Empire O. & R. Co. No. 2-G State, C SE SW sec. 2-21-37. Drlg. 2,630 ft.
Gulf Oil Corp. No. 1-E Arnott-Ramsey, C SW SW sec. 16-25-37. T.D. 1,330 ft.; set 7⅝-in. at 1,316 ft.
Ohio Oil Co. No. 7 State McDonald, C SW SE sec. 16-22-36. T.D. 1,535 ft.; set 9⅝-in. at 1,530 ft.

Eddy County

Barnsdall Oil Co. No. 5 Dodd, sec. 22-17-29. T.D. 2,757 ft. P.B. 2,730 ft.; shot 2,580-2,730 ft.; est. 60 bbls.
Flint Prod. Co. No. 1-B State, SE sec. 20-17-30. Drlg. 3,695 ft.
Carper Drlg. No. 2 Gissler, NW sec. 23-17-30. Loc.
Repollo Oil Co. No. 1-D Parke, sec. 15-17-30. Drlg. 3,052 ft.
Flynn, Welch, Inc., No. 1-B Stevens, sec. 13-17-30. Drlg. 3,494 ft.
Barnsdall Oil Co. No. 6 Dodd, sec. 22-17-29. Drlg. 2,475 ft.
Grayburg Oil Co. No. 3 Keely, SE NE NE sec. 24-17-29. T.D. 2,873 ft. Set 7-in. 2,803 ft.
F. W. & Y. Oil Co. No. 3 Jackson, C NW SE sec. 13-17-30. Drlg. 1,615 ft.
F. W. & Y. Oil Co. No. 4 Gissler, C SE SE sec. 14-17-30. T.D. 2,961 ft. fsg.
F. W. & Y. Oil Co. No. 5 Gissler, C NE SE sec. 14-17-30. Drlg. 2,747 ft.
Harry Leonard No. 10 State, SE SW SW sec. 27-17-29. Drlg. 2,515 ft.
Fred Brainerd No. 2 Brainerd, sec. 5-18-27. M.I.M.
W. A. Nichols No. 1 Johnson, NE sec. 35-16-21. Wildcat; T.D. 580 ft. Junked hole; skidded rig.
F. E. Baker No. 1 Eddy, NE sec. 12-22-27. T.D. 55 ft.; M.I.M.
Alscott Oil Co. No. 1 Goodale, SW NW SE sec. 30-18-29. Drlg. 1,427 ft.
H. & W. Drlg. Co. No. 1 Danford, C SE SE sec. 9-22-29. T.D. 1,952 ft.; straightening hole.
Franklin Pet. Corp. No. 1 Nelson, NW sec. 4-18-30. Wildcat. T.D. 1,305 ft. S.D. for repairs.
Pool Oil & Gas Co. No. 1 Reed, SW sec. 28-24-28. Wildcat. Spudded.
F. W. & Y. Oil Co. No. 4-A Jackson, NE sec. 13-17-30. M.I.M.
F. W. & Y. Oil Co. 3-X Jackson, SE sec. 13-17-30. Drlg. 870 ft.
F. W. & Y. Oil Co. No. 2-A Stevens, C NW SW sec. 13-17-30. Loc.
Continental Oil Co. No. 1 Etz, C NW NE sec. 24-16-30. Cellar and pits.
Continental Oil Co. No. 1 Keyes, C NW NE sec. 28-20-30. R.U.M.
William Dooley No. 1 Featherstone, NE NW NW sec. 24-20-26. Drlg. 308 ft.
C. F. Ingram No. 1 Page, NE NE SW sec. 15-21-28. T.D. 274 ft.; to set csg.
W. O. Snyder No. 1 Pecos Irrigation, C NE SE sec. 15-25-28. T.D. 575 ft.; S.D.
Superior Oil Co. No. 1 Foster, SE SE NE sec. 17-17-31. Loc.
Ed Bryant No. 1 Stebbins, C NE SW sec. 19-20-29. T.D. 150 ft.; set 10-in. csg.

Roosevelt County

Dummitt Oil Co. No. 1 Todd, SE SE sec. 34-3n-29. T.D. 656 ft. Reaming.

Otero County

George Mulvey No. 1 State, SW cor. sec. 11-25-8e. T.D. 263 ft. S.D.
Fred Turner No. 1 Hattie Evans, NW NW SW sec. 22-14-12. O.W.D.D.; wildcat, drlg. 2,885.

Curry County

Bond & Harrison No. 1 Hart Ranch, C NW SE sec. 13-2n-31. T.D. 1,246 ft.; W.O.S.T.

McKinley County

S. Dysart No. 1 Government, NE sec. 14-14-10w. T.D. 1,390 ft. Fishing.

COLORADO

Boulder County

Boulder Prod. & Dev. Co. No. 1 Harlow Est., SE NE sec. 36-2n-71w. T.D. 719 ft.; rmg. to run pipe to bottom.

Mesa County

Location was released for the test to be drilled in the old DeBeque field in the Midwest Drilling & Development Co. No. 1 Callahan, NE NW SE section 30-8s-97w. This is the operating company for the Colopet Corp., organized by Los Angeles people recently to operate in this state. It is rigging up cable tools and will spud about June 20 in a 15½-inch hole to go to a sand expected at 2,100 feet. If commercial production is not encountered at that depth, it will go deeper. The location is three-fourths of a mile northwest of the old Callahan well drilled in 1914 by the Grand River Valley Oil Co., which had a show of oil at 1,460 feet and another at 1,807 feet. It encountered the main sand at 2,007 feet. This sand sprayed oil for 14 hours when water showed up. It produced 60 bbls. of oil daily for a month and then went dead. The hole then was deepened to 3,045 feet where it encountered water and was abandoned. The new test is on what has been named the Mesa Verde structure. Elevation is 5,100 feet.

Midwest Drilling & Dev. Co. No. 1 Callahan, NE NW SE sec. 30-8s-97w. R.U.C.T. (first report).

Moffat County

The Mountain Fuel Supply Co. No. 1 Donnell, a semi-wildcat in the Powder Wash field, half a mile northwest of No. 1 Stewart, is bottomed at 5,326 feet in saturated oil sand and is running the 8⅝-inch pipe to the top of the sand at 5,245 feet to test. An attempt to make a drill stem test was unsuccessful. This is believed to be the same horizon encountered at 5,014-32 feet in No. 1 Allen, which made 285 bbls. in six hours. It had a show of gas but no oil in the lower Wasatch at 5,053 feet.

Universal Consol. O. Co. and Italo Pet. Corp. No. 1 Wanner-Govt., C SE NE sec. 36-12n-98w. W.I. rotary, and drlg. W.W.
Morapas Pet. Co. No. 1 Coles, SW SW SE sec. 1-3n-92w. Drlg. 1,150 ft.; good S.G. in shale in 4 horizons between 950 and 1,025 ft.
Mountain Fuel Supply Co. No. 1 Donnell, C SE NE sec. 31-12n-97w. T.D. 5,326 ft.; rng. 8⅝-in. to test.
Anderson-Kerr Drlg. Co. et al No. 1 Denise, C SE SE sec. 19-9n-99w. T.D. 2,495 ft.; U.R. 10-in. to bottom.
Anderson-Kerr Drlg. Co. No. 1 Marrs, C SE NE sec. 17-11n-100w. Bldg. rig and M.I.M.
Texas Co. No. 4 Iles Inv. Co., Lot 7, sec. 23-9n-92w, Iles field. Drlg. 1,151 ft.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NW sec. 31-36n-17w. T.D. 3,960 ft. Standard rig compl.; pulling 4½-in. to U.R. 6⅝-in. to bottom.

Morgan County

Swisher et al No. 1 Lunt, SE cor. sec. 3-4n-60w. T.D. 1,718 ft.; shot 19 qts. exploded prematurely; C.O. to shoot again.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75w. Making new hole at 4,590 ft.; good S.O.

WYOMING

Albany County

Murphy Oil Co. No. 7 Holst, NE NE SE sec. 13-17n-77w. Drlg. 3,506 ft. in green sh.
Hal Blakeman No. 1 Chappie, C NE NW sec. 33-21n-76w. T.D. 1,681 ft.; installing heavier equip.
Murphy Oil Co. No. 1 Holst-Woolf, NW NW NW sec. 19-17n-76w. T.D. 4,067 ft.; tstg. Dakota through perforated 7-in.
Murphy Oil Co. No. 4 Wilson, NW NW SW sec. 18-17n-76w. Drlg. 918 ft.

Big Horn County

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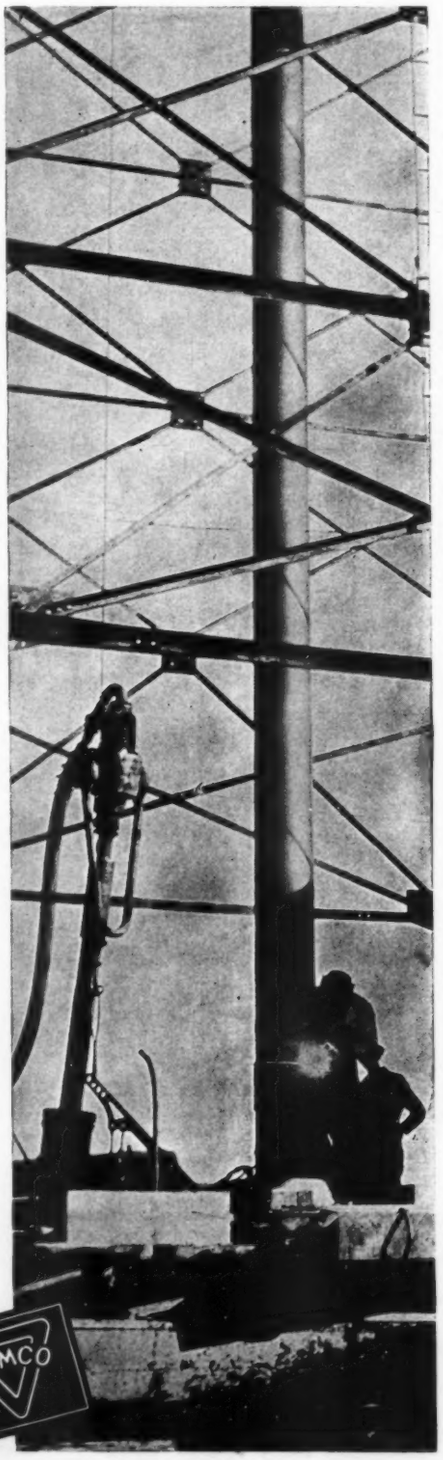

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J. W. Bales operation on the Zeisman dome, which was shut down at 1,010 feet for several months, and has resumed drilling. The Yale Petroleum Corp., recently formed to consolidate some of its properties, is now the operating company for the Stock-Jones well, formerly carried as the Stock Oil Co.

Big Horn Petroleum Trust No. 1 Parker, C SW SW sec. 23-49n-89w. Drlg. 1,290 ft.
Yale Pet. Corp. No. 1 Stock-Jones, SE cor. Lot 52-56n-97w. Drlg. 2,600 ft.
Ohio Oil Co. No. 2 Byron-Baker, SW NW sec. 23-56n-97w. Drlg. 1,048 ft.
Ohio Oil Co. No. 1 Pryde, C SW SE sec. 24-56n-97w. Drlg. 3,080 ft.
Ohio Oil Co. No. 1 Smith, NE cor. Lot 61, sec. 33-56n-97w. Drlg. 3,820 ft.; prep. to core.
Woods-Callahan Oil Co., Ltd., and Wyoming O. & R. Co. No. 1 Evans, NE NE NW sec. 12-44n-91w. Drlg. 712 ft. in lower Sundance.

Campbell County

G. J. Sherin et al No. 1 Rodes, NE SE SW sec. 24-49n-74w. Drlg. 500 ft.

Carbon County

The Producers Oil Co. is spudding in a test on the Lake & Valley dome to go to the Frontier. The location is 200 feet from the north line on the center line of section 14-20s-88w, half a mile northwest of a well drilled to 4,915 feet in 1927 by the Lake Valley Oil Co. It is 2 miles north of some small gas wells in section 35 producing from the Dakota at 3,750 feet.

Producers Oil Co. No. 1, CNL sec. 14-20s-88w. Spdg. (first report).
Ohio Oil Co.-California Co. No. 5 Cronberg-U. P., C NW NW sec. 25-21-79w. Spdg.
Ohio Oil Co. No. 1 Union Pacific, C NW NW sec. 20-21n-80w. Bldg. rig.
Ohio Oil Co.-California Co. No. 3-A Kyle, C SW NE sec. 26-21n-79w. Drlg. 505 ft.
Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78w. T.D. 2,347 ft.; P.B. to second Sundance at 2,140-80 ft.; shot 40 qts.; tstg.
Ohio Oil Co.-California Co. No. 4 Union Pacific, C SW SW sec. 25-21n-79w. T.D. 5,617 ft.; P.B. to 5,455 ft.; tstg.
Ohio Oil Co.-Medicine Bow Oil Co. No. 1 U.P.-Wister, C NW SW sec. 17-22n-78w. Drlg. 305 ft.; 11⅝-in. at 142 ft.
Ohio Oil Co. No. 8 Dixon, SE NE SE sec. 34-20n-78w. Drlg. 4,833 ft.; top Embar 4,550 ft.

Converse County

The Wyoming Southern Oil Co. has a small oil well in No. 1 Jennie Evert, NW NW SW section 26-32n-69w, in the Shawnee district. Oil is standing 270 feet in the hole at a total depth of 560 feet. There is some gas with the oil. The location is one-third of a mile east of the same company's Nos. 1 and 2 Salisbury, which were completed at approximately the same depth for 7,500,000 feet of gas each per day. The pay is probably in the contact between the Tertiary and the Cretaceous.

Elbe Oil Ld. & Dev. Co. No. 1 Benham, NW NE sec. 5-31-70w. M.I.M. (first report).
Tom Carney No. 1 Beaver, SE SE SW sec. 28-35n-68w. M.I.M.
Chadron-Osage Oil Co. No. 1 State, SW cor. sec. 16-32n-69w. Drlg. 3,600 ft.

Fremont County

H. Kenyon Burch No. 1 Enos, CEL NE NE sec. 28-3n-1w. S.D.O. 970 ft.; no shows.
Ben Stewart No. 1 Darnell, NE SE sec. 26-3n-1w. M.I.M. to test Frontier at 600 ft.; 1½ mi. E of Pilot Butte wells.

Johnson County

Carter Oil Co. No. 3 Rider, C NW SE sec. 17-48n-82w. Drlg. 3,167 ft.

Lincoln County

H. M. Eller et al No. 4 Govt., SE NW SW sec. 32-19n-116w. T.D. 401 ft.; will test S.O. in lenticular sd. at 397-401 ft.
Place Oil Co. No. 1 Davis, SE SE SE sec. 9-26n-11w. T.D. 1,000 ft.; ran 8¼-in. to 977 ft.; failed to get W.S.O.; will U.R.

Natrona County

Stanolind O. & G. No. 1 T.P., C NW SE sec. 26-40n-79w. Drlg. 2,725 ft.
Wyalta Oil Co. No. 4 Govt., NW NW sec. 5-29n-81w. Cmtd. 6⅝-in. on top Sundance at 1,082 ft.; rng. 2-in. tbg. to test at 1,030-72 ft.
Wyalta Oil Co. No. 5 Govt., SW SW sec. 30-30n-81w. Tstg. at 1,021 ft.
Wyalta Oil Co. No. 6 Govt., NE SE NW sec. 5-29n-81w. Cmtd. 10-in. at 704 ft.; Dakota at 565-664 ft.

Niobrara County

Ohio Oil Co. No. 2 Taylor-O.P.C-32, NW NW SW sec. 3-35n-65w. Drlg. 192 ft.
Ohio Oil Co. No. 2 Leo O.P.C. NE NE SE sec. 35-36n-65w. Rig; W.O. tools.
Ohio Oil Co. No. 1 Leo-O.P.C.-7, NW NW SE sec. 35-36n-65w. Drlg. 870 ft.
Ohio Oil Co. No. 10 Lamb-Acct. 2, C NE SE sec. 5-35n-65w. Bldg. rig.
Continental Oil Co. No. 1 Leach, SW NE NE sec. 29-36n-64w. Cmtd. 13⅜-in. at 350 ft.
Argo Oil Co. No. 4 Ford, SW NW SE sec. 33-36n-65w. R.U.
A. B. Cobb and Holly Dev. Co. No. 2 Novick, SE SE SW sec. 6-35n-65w. Out of red beds at 4,714 ft.; drlg. ahead.
Continental Oil Co. No. 4 Schuricht B, NW SW SE sec. 6-35n-65w. T.D. 3,978 ft.; C.O. and conditioning hole to test.
Continental Oil Co. No. 8 Otto Rohlff, SW SW SE sec. 31-36n-65w. Rig. W.O. tools.
Continental Oil Co. No. 10 Tom Bell Cattle, C SW NW sec. 34-36n-65w. Drlg. 4,700 ft. red sh.
MacKinnie Oil & Drlg. Co. No. 2 Thompson, NW NW NE sec. 7-35n-65w. Drlg. 3,990 ft.
J. M. Huber Corp. No. 1 Lamb, SE SE SW sec. 27-36n-65w. S.D. 2,725 ft. in sdy. sh.; tearing down rig.

Park County

Resolute Oil Co. No. 1 Northern Pacific, C NE NW sec. 21-57n-101w. Loc.
Kinney-Coastal Oil Co. No. 3 Govt., SW NW NE sec. 24-56n-97w. T.. 4,338 ft.; R.U. to deepen.
Resolute Oil Co. No. 1 Govt., C NE NE sec. 20-57n-101w. Drlg. 4,000 ft.
Texas Co. No. 4 Sonners, SE cor. sec. 29-51n-100w. M.I.M. (Oregon Basin field) (first report).
General Pet. Corp. No. 1 Govt., NW NW NW sec. 33-47-100. T.D. 6,076 ft.; P.B. to Tensleep; C.O.

Platte County

Dividend O. & R. Co., Inc., No. 1 CSL NW SW sec. 17-24n-66. Resuming at 2,385 ft.

Sweetwater County

Mountain Fuel Supply Co. No. 1 Stone, C SW SW sec. 18-19n-103w. Drlg. 2,785 ft.
Mountain Fuel Supply Co. No. 3 Union Pacific, SE NE sec. 15-16n-104w. T.D. 2,270 ft.; 8⅝-in. 2,246 ft.; prep. to shoot.
Mountain Fuel Supply Co. No. 1 Union Pacific, C SE NE sec. 29-15n-104w. Loc. South Baxter Basin (first report).

Weston County

The Big Indian Oil & Development Co. is moving in materials for a test to the Minnelusa at around 2,000 feet on the Pump Creek dome in northern Weston County. Location is in the SW SE NW section 26-48n-64w, about 6 miles to the southeast of a test drilled by John Brorphy last year in section 10-48-65. Last-named had the Dakota at 470-520 feet and had a show of oil with water below the Lakota at 550-610 feet. It was abandoned at 685 feet.

Big Indian O. & D. No. 1 George, SW SE NW sec. 26-48n-64w. M.I.M. (first report).

MONTANA

Big Horn County

Big Horn O. & G. Co. No. 31, CWL SE NW sec. 23-1s-33e. Drlg. 625 ft.
Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. Drlg. 3,950 ft.

Carbon County

R. C. Tarrant is rigging up combination rig for a test of the Roscoe dome to the northwest of the Dry Creek field and on the same general line of folding as the Nye, Dean and Ingersoll domes, in his No. 1 Heare, NE NW section 14-6s-19e. The objectives will be the Frontier and Dakota series, the later being at 5,500 feet on the Dry Creek dome. The principal acreage on the struc-

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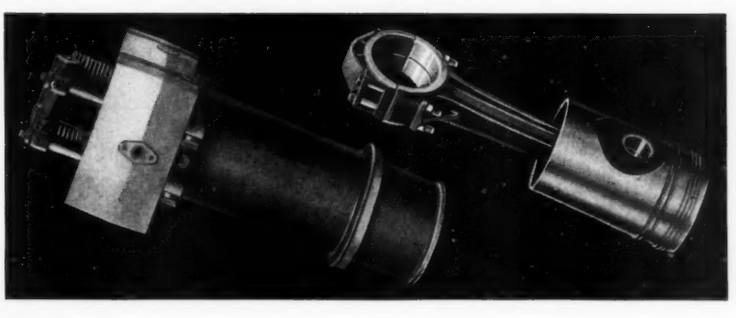

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ture formerly was held by the Ohio Oil Co., but was released by that company during the depression.

R. C. Tarrant No. 1 Heare, CWL NE NW sec. 14-6s-19e. R.U.R. (first report).
Ohio Oil Co. No. 16 Kirt, C SE SE sec. 4-7s-21e. Drlg. 2,020 ft.

Carter County

Tower Oil Trust No. 1, C SW NW sec. 8-9s-61e. R.U.C.T.

Cascade County

C. Leonard Smith No. 1-A Smith-Schwingle, NE NE SW sec. 14-22n-2e. Asked for bids from rotary contractors to deepen from 620 ft.

Fallon County

Hagasco Corp. No. 1, C SE sec. 24-5n-6e. Drlg. 720 ft.

Fergus County

Several of the wells in the Winifred district which have been shut down for some time have been abandoned. These are Judith Operating Co. No. 2 Scharf, CWL NW NE section 35-22n-17e, abandoned at 3,200 feet; Emmons and others No. 4 Government, SW cor. section 3-21n-18e, abandoned at 432 feet; and Emmons and others No. 3 Government, SE NE NE section 6-21n-18e, abandoned at 1,081 feet.

Emmons et al No. 5 Govt., SW NW SW sec. 24-22n-18e. S.D. 650 ft.

Glacier County

Cut Bank had two completions, of which one was a dry hole and the other a small well. The dry hole was the Texas Co. No. 1 Lennon, C NW SE section 24-33n-6w, which was abandoned at 3,050 feet. It had the Cut Bank sand at 3,004-25 feet. It was shot with 20 quarts without results. It is located between two producers.

The other well is O. E. Lee No. 1 Davis, C S half SE section 15-32n-6w, an outpost well on the southwest. While it is a small well, it is rather an important completion due to the fact that it borders on Indian tracts which the department of the interior had planned on offering for sale. The sale was held up, however, upon petitions of operators who were afraid the sale would bring about an extensive campaign when the oil is not needed. The size of the well indicates that production will not extend very far in that direction and as a result the sale may be called off. The No. 1 Davis was completed at 3,340 feet and oil rose 200 feet from the Cut Bank sand at 3,310-25 feet. It bailed at the rate of 15 bbls. per day. It will be shot. It is about half a mile north of H. R. Patterson No. 1 Chatterton, SE NE section 22-32-6w, which marked an extension of the pool to the southwest last fall. The Patterson well swabbed 98 bbls. the first 24 hours after shooting.

Glacier Prod. Co. No. 1 Connolly A-20, C SE SE sec. 30-34n-5w. Spdg. 110 ft.
P.M.K. Co. No. 3 Haglund, Sr., SE NW NE sec. 14-34n-6w. Drlg. 675 ft.; Colo. 490; 10¾-in. 525 ft.
Wm. Hanlon No. 3 All.-128, CWL SW NE sec. 12-32n-6w. R.U.
Texas Co. No. 2 Tweedy, C NE NW sec. 21-35n-6w. Drlg. 325 ft.
A. B. Cobb No. 5 Walburger, C NE SE sec. 35-35n-6w. R.O.G. (first report).
Grant Oil Co. No. 1 Rueffen, C SW SE sec. 5-32n-5w. R.U.
Montana Headlight Oil Co. No. 5 Britton, SE SW NE sec. 14-34n-6w. Drlg. 2,630 ft.
R. C. Tarrant No. 4 Reickhoff, NE NE SE sec. 22-32-6w. Drlg. 1,275 ft.; 10¾-in. at 740 ft.
Glacier Prod. Co. No. 2 State-16, SW SW SW sec. 16-33n-5w. Drlg. 2,535 ft.
Glacier Prod. Co. No. 2 Neill, NE NE NE sec. 20-33n-5w. Cmtd. 7-in. at 2,938 ft.
Texas Co. No. 4 Sec. 9 Unit, C NE NW sec. 9-32-5w. T.D. 3,075 ft.; cmtd. 7-in. at 3,072 ft.
Texas Co. No. 2 Hardwick, C NE SE sec. 17-32n-5w. T.D. 2,965 ft.; cmtd. 7-in. at 2,957 ft.
A. E. Wilkinson No. 3 All.-127, C SE SE sec. 1-32n-6w. Drlg. 1,920 ft.
K. D. Pardee No. 1 Corrigeaux, NE NE SE sec. 35-34n-6w. Rng. 7-in. below 2,900 ft.; S.O.
Hannah-Porter No. 3 All.-130, NW SE SW sec. 6-32n-5w. Cmtd. 7-in. at 2,899 ft.
A. R. Pardue No. 1 Anderson, C SE SW sec. 31-32n-5w. Drlg. 2,615 ft.
A. E. Crumley No. 2 All.-112, C NW SW sec. 6-32n-5w. Drlg. 2,984 ft.; 1,400 ft. of oil.
Nadeau Bros. No. 4 Farmers State Bank, CSL NE sec. 17-33n-5w. Drlg. 2,895 ft.; shot Sunburst at 2,862-69 ft. and fluid rose 350 ft.

Petroleum County

H. C. Rowland No. 1 Kalispel, NE NE SE sec. 35-14n-25e. Drlg. 819 ft.
O. B. Canfield No. 1 Govt., CEL SE NE sec. 21-17n-24e. Rng. 3-in. to set at 750 ft.

Pondera County

Clinch Pet., Ltd., No. 1 Hollam, NW NW NW sec. 12-28n-6w. T.D. 2,966 ft.; S. salt w. at 2,944 ft. in lower Cut Bank; U.R. 7-in.; will go to Madison.

Roosevelt County

John W. Schmidt et al No. 1 Frue, NW NW NE sec. 21-28n-50w. Drlg. 600 ft.

Toole County

The Kevin-Sunburst field had three completions and four new operations. The best completion was the Rimrock Oil Co. No. 2 Schmidt, CEL SW NW section 29-35n-3w, in the west end where some good wells have been completed recently. It is a 200-bbl. well at 1,789 feet after acidizing with 500 gallons. Contact was at 1,780 feet.

The Consolidated Gas Co. No. 2 fee, CEL SE NW section 29-35n-2w, is a 150-bbl. well at 1,501 feet, 1 foot in the contact, after acidizing with 1,000 gallons.

The Twin Buttes Syndicate No. 1 Thompson, NE NE NW section 3-35n-3w, is a small well at 1,696 feet, after acidizing. Contact was at 1,685 feet.

A Beardslee No. 7 Swears, NE SW NW sec. 9-35n-2w. Spdg. (first report).
Lamont Pet. Co. No. 3 Van Note, CNL NW NW sec. 30-35n-2w. Spdg. (first report).
Prevol & Shea No. 1 Porter, CSL NW NW sec. 12-34n-3w. Spdg. (first report).
Nepstad et al No. 2 Haugen, C NW NE sec. 11-35n-3w. Drlg. 600 ft. (first report).
Atland No. 1 Ward, C NW SE section 29-35n-3w. Drlg. 1,435 ft.
Leo Sweeney No. 5 Davis, NW NE SW section 27-35n-3w. Drlg. 800 ft.
Big West Oil Co. No. 4 McDonald, CNL SE SW sec. 19-35n-2w. Drlg. 1,405 ft.; 200,000 ft. gas in Sunburst.
William McKnight No. 2 State, NW NW NW sec. 16-35n-2w. T.D. 1,615 ft.; contact 1,602 ft.; nice S.O.; will acid.
New Era Fuel Co. No. 1 Goeddertz, CWL NE SW sec. 2-35n-3w. T.D. 1,813 ft.; contact 1,792 ft.; S.O.; acid., 1,000 gals.
A. C. Crumley No. 12 Shaw, SE NE NW sec. 35-26n-2w. Drlg. 1,410 ft.
E. C. Carney No. 2 Stockman, CSL NW NE sec. 11-35n-2w. Spdg.
Security Oil Co. No. 1 Kopsing, CWL SW SE sec. 24-34n-2w. Loc. (first report).
Capitol Oil Co. No. 1 Pace, C SE SW sec. 27-36n-1w. T.D. 1,680 ft.; S.O.; rng. 7-in.
S. V. Day No. 3 Halter, NE NE NE sec. 17-35n-2w. Drlg. 540 ft.
Watson et al No. 2 Leach, SE NE NE sec. 31-35n-3w. T.D. 1,796 ft.; contact 1,795 ft.; acid, 1,000 gals.; very small; may abd.
Browning-Sunburst 32 Synd. No. 1 Goeddertz, NE NW SW sec. 21-36n-3w. Drlg. 1,500 ft.
Bryant Bros. No. 1 Lashbaugh, NE SW NW sec. 34-25n-2w. T.D. 850 ft.; R.U. heavier machine to resume.
Ogden-Kevin Oil Co. No. 7 Zachot, SE SW NW sec. 20-35n-1w. S.D. 900 ft.
Gus Blaze No. 5 Burwash, CSL NE SW sec. 15-34n-1w. Drlg. 1,528 ft. in sd.; Ellis 1,525-28 ft. est. 3 or 4 bbls.
F. C. Platt No. 1 Roseth, SE SE NE sec. 35-35n-3w. T.D. 1,528 ft.; installing pump.
Treasure State Oil Co. No. 4 Shaw, SW NE NE sec. 35-36n-2w. T.D. 1,571 ft.; Sunburst 1,551-71 ft.; will shoot.
Eagle Pet. Co. No. 1 Haugen, C SE NW sec. 12-35n-3w. Drlg. 1,585 ft.; 1,000 ft. of oil.
S. F. Scotland No. 1 McNamar, C NE SW sec. 29-35n-3w. Contact 1,758-60 ft.; acid. 500 gals.; no results; acid. 1,000 gals.; installing pump.

Outside Kevin-Sunburst

Model Oils, Inc., No. 1 Fey, NE SW sec. 5-37n-3e. Rig.
T. P. Kyle No. 1 Kielbaugh, CWL SW SW sec. 2-37n-1w, Bow and Arrow dome. Drlg. 500 ft.

(Continued on Page 139)

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SINCLAIR

9 New Wells Completed in Eastern Kentucky

By SPECIAL CORRESPONDENT

ASHLAND, Ky., June 21.—Eight oil completions and one gas well completion were reported in Eastern Kentucky in the past week with the spotlight turned on Inland Gas Corp. No. 1 E. A. Hammonds, on the right fork of Troublesome Creek near Hindman in Knott County.

This well with a total depth of 1,941 feet, in Maxton sand, had a flow of 550,000 feet of gas per day. Moving onto location the last of April, steady progress was made in the drilling operations with the completion reported yesterday.

South Penn Oil Co. took the lead in oil well completions with one each in Estill and Lee counties. The company's No. 48 J. M. Garrett was completed at 816 feet with a flow of 10 bbls. of oil per day and No. 93 on Flahaven Land Co. holdings in Beattyville district of Lee County was completed at total depth of 1,146 test with flow of 30 bbls. of oil per day, the best well of the week.

The Morbald Development Co. No. 2 Charles Wheeler, on Litteral Fork of the Wheelersburg district of Magoffin County, was completed at the 1,020-foot mark with daily flow of 5 bbls.

Two other completions were reported in Estill County with Johnnie Sparks getting a daily flow of 15 bbls. of oil per day in No. 13 Clay Alexander on Tickey Fork, and Petroleum Exploration completing No. 15 Sam Brinegar, in same district, 1-bbl. well.

McGann & Garrison completed No. 1 Andrew Combs on Billie's Fork in Big Sinking district of Lee County at 1,000 feet, good for 25 bbls. of oil per day.

Ashland Oil & Refining Co. completed No. 3 on the Joseph Wheeler, James Skaggs and Andrew Skaggs land at a total depth of 838 feet, with a showing indicating a 10-bbl. well. This well is on a location at a point where land owned by the above named men joins.

The Whitmer Oil Co. completed No. 2 J. C. White on Billie's Fork in the Big Sinking district of Lee County with the well at a total depth of 700 feet and a daily oil flow of 10 bbls.

The Kentucky & West Virginia Gas Co. reports the following operations in Eastern Kentucky this week: No. 549 T. J. Hagans, down 1,470 feet in Big Lime; No. 550 Charles and Francis Sturgill at 1,731 feet, in Big Lime; No. 551 Jessie Caldwell, is in sand at 1,045 feet; No. 552 Elizabeth Sellards, 1,060 feet in sand; No. 5221 Isaac Slone, Maxton sand at 1,793 feet; No. 5223 C. W. Freece, moving to location; and No. 5224 Burris Herald, moving to location.

Inland Gas Corp. reports the completion of No. 1 E. A. Hammonds, right fork of Troublesome Creek in Knott County at total depth of 1,941 feet, in Maxton sand with 550,000 feet of gas. Inland's No. 5 S. B. Webb, on Jones Fork near Lackey, at depth of 2,514 feet with operator preparing shot. The same firm has reached 1,383 feet, in Salt sand, in No. 2 R. C. Kilgore on Troublesome Creek, after completing fishing job in the second Salt sand.

In Magoffin County, Bed Rock Petroleum Co. is setting up rig for No. 29 E. R. Caudill, on Caudill Fork of Burton. The Morbald Development Co. completed No. 2 Charles Wheeler on Litteral Fork in the Wheelersburg district at a total depth of 1,020 feet, and reports a flow of 5 bbls. of oil per day. A. V. Hoenig is fishing in No. 34 Green Rice on Litteral Fork.

In Lawrence County, Ashland Oil & Refining Co. has completed No. 3 Wheeler, Skaggs and Skaggs land at total depth of 838 feet with showing of 4 bbls. per day. This is a pressure well on Keaton Creek in the Martha district. No other reports were made from the county during the past week.

In Wolfe County, Jim Hollon No. 2 on George Lovelave farm on Trace Fork of Stillwater is shut down for a few days at 2,300 feet.

In Estill County, Petroleum Exploration completed No. 15 Sam Brinegar on Tickey Fork at 201 feet, a 1-bbl. well. Johnnie Sparks reports completion of No. 13 Clay Alexander land nearby, at 337 feet, good for 15 bbls. per day.

South Penn Oil Co. completed No. 48 J. M. Garrett, Furnace district, at 816 feet, with an estimated flow of 10 bbls. of oil per day from Corniferous lime.

In Lee County the South Penn Oil Co. completed No. 93 Flahaven Land Co., Beattyville district, at 1,146 feet, in Corniferous lime, with initial production of 30 bbls. Rush Cable is fishing No. 5 L. Noe on Little Sinking Creek of the Big Sinking district.

Henry Day is down 800 feet in No. 7 in Poplar Thicket on top Bald Rock Hill. Floyd Fitch has reached the 650-foot level in No. 1 on Bud Ross' land, Cave Branch. McGann & Garrison completed No. 1 on Andrew Combs, Billie's Fork at 1,000 feet, with production of 25 bbls. per day, and the Whitmer Oil Co. completed No. 2 J. C. White nearby at 700 feet, good for 10 bbls. per day. Central State Oil Co. No. 3 Marion Shoreman, on Sign Board, was reported dry at 400 feet. The above five wells are all in the Big Sinking district.

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East and East Central Texas

PLAN TESTS IN HENDERSON, LAMAR, RED RIVER COUNTIES

By L. E. BREDBERG

DALLAS, Tex., June 21—Only one wildcat location was staked in the East Central Texas district in the past week. Two other tests are proposed for Lamar and Red River counties. The Humble Oil and Refining Co. made location for a deep test on the Mrs. S. Hassell lands, in the J. Beard Survey, two miles north of Jarvis in Anderson County, and in the vicinity of the test now temporarily abandoned at 5,245 feet by the Barnsdall Oil Co., but which will probably be carried deeper in quest of Trinity production. That test is located on the H. C. Swanson lands in the R. Duty Survey, near Jarvis, and two miles south of the above Humble location. The Humble Co. blocked up several thousand acres in the area after the Barnsdall test was started.

The Mexia-Talco Fault line test of the Stanolind Oil & Gas Co., on the J. P. Hawks farm, in the R. Ragsdale Survey, west of Campbell, is reaming hole at a total depth of 6,570 feet. Another rig, heavier than the one in use, will be moved in over the hole to make an exceptionally deep test on the likely looking faulted structure, which was considered one of the best possible producing features in the district, although it failed to pay off in the Paluxy and Glen Rose.

About seven miles northeast of Paris, in Lamar County, J. H. Blackburn and others are planning to drill a Trinity sand test on lands of the Federal Land Bank of Houston, in the south half of the A. T. Newell Survey.

Another proposed test for the northern sector of the district is that of Harrison & Abercrombie on the W. F. Fausett lands, about fifteen miles northwest of Clarksville in Red River County. These operators have drilled several tests in this part of the county, none of which proved commercial producers.

Will Test LaRue Dome

The test scheduled for the well known LaRue dome is eastern Henderson County by E. B. LaRue and the American Liberty Oil Company, is expected to get started around the first of August. Tentative location is in the P. Jackson Survey, and a number of major companies have contributed bottom hole money for the test, which is to be deep. Several dry Woodbine sand tests have been drilled on this structure, but this will be the first Trinity test, and it will be closely watched, especially as the Tide Water Associated Oil Co., Humble Oil & Refining Co., and Seaboard Oil Corp. have opened a Trinity field near Opelika to the north of it and in the northeastern corner of the county.

Another scheduled wildcat is to be drilled by Al Bierman on the Edgar Strong land in the F. A. Anthony Survey, in Cherokee County. Several major companies are reported as purchasing protection acreage in the area.

Hopkins Hopes

Housh & Thompson's No. 1 Spencer, located in the G. Linthicum Survey, near Hatchetville, and about five and one-half miles southwest of the Sulphur Bluff field, in Hopkins County, is one of the more important Paluxy sand tests now drilling in the district. It cut the fault at 3,732 feet, picked up the top of the Georgetown lime at 3,836 feet, and was expected to reach the Paluxy sand around 4,600-50 feet. It is now drilling around 4,500 feet.

Operators in the Sulphur Bluff field have asked for a change in allocation of production in the Hopkins County field, wanting it put on a per well basis instead of a potential basis. The railroad commission has the petition under advisement.

EAST TEXAS COMPLETIONS

Gregg County

Atlantic Refining Co. No. 37-B Burnside, 3,468-3,590 feet, 68 bbls. per hour; No. 16 Lee, 3,596-3,750 feet, 104 bbls. per hour; No. 71 Moore, 3,505-3,630 feet, 85 bbls. per hour. Barnsdall Oil Co. No. 20 McGrede, 3,574-82 feet, 14 bbls. in 15 minutes. Faith Oil Corp. No. 9 Fenton, 3,710-36 feet, 20 bbls. in 32 minutes. General American Oil Co. No. 1-A Adams, 3,635-37 feet, 20 bbls. in two hours on pump. Humble Oil & Refining Co. No. 11 Clemens, 3,625-49 feet, 50 bbls. per hour; No. 13 Willingham, 3,665-91 feet, 55 bbls. per hour. O. E. Murphy, Trustee, No. 10 Doby, 3,521-76 feet, 75 bbls. per hour. Stanolind Oil & Gas Co. No. 20-B Stucky-Thrasher, 3,515-77 feet, 62 bbls. per hour. Sun Oil Co. No. 16 Campbell, 3,504-28 feet, 20 bbls. in 15 minutes. Tide Water Associated No. 16 Moore, 3,505-38 feet, 12 bbls. in 10 minutes. Adams & Lyle No. 14 Howard, 3,553-58 feet, 50 bbls. per hour. B. & R. Investment Co. No. 2-A Bean-Willoughby, 3,541-58 feet, 30 bbls. in 30 minutes. Gulf Oil Corp. No. 33 Culber, 3,541-66 feet, 41 bbls. per hour. Hamilton & Ellis No. 4 Utzman, 3,527-35 feet, 20 bbls. per hour on pump. A. B. Ryan No. 2 I.&G.N.R.R., 3,548-3,630 feet, 20 bbls. in 30 minutes. Shell Petroleum Corp. No. 71 Watson, 3,589-3,641 feet, 38 bbls. in 30 minutes. Sultana Oil Co. No. 1-J Sabine River Tract 6, 3,513-40 feet, 50 bbls. per hour. Texas Co. No. 12 Davis, 3,562-71 feet, 93 bbls. per hour. Westgate & Greenland No. 2 State, 3,465-75 feet, 25 bbls. in 20 minutes; No. 3 State, 3,465-73 feet, 45 bbls. in 40 minutes.

Rusk County

Barnsdall Oil Corp. No. 7 Gill, 3,605-06 feet, 10 bbls. in 15 minutes. Empire Oil & Refining Co. No. 16 Leverett, 3,711-47 feet, 915 bbls. day. Humble Oil & Refining Co. No. 36-B Sexton, 3,620-99 feet, 63 bbls. per hour. Texas Co. No. 10 Chappell, 3,712-16 feet, 25 bbls. in 30 minutes. Tide Water Associated No. 19-A Bean, 3,560-3,605 feet, 5 bbls. in 10 minutes. Federated Oil Co. No. 5 Mayfield-Alford, 3,604-38 feet, 30 bbls. per hour. Gant and others No. 37 Moore, 3,553-67 feet, 30 bbls. per hour; No. 40 Moore, 3,581-3,606 feet, 28 bbls. per hour. Gilcrease Oil Co. No. 10 Bradford, 3,602-54 feet, 12 bbls. in 15 minutes. Ohio Oil Co. No. 43 Moores, 3,621-95 feet, 16 bbls. in 15 minutes. Pyramid Petroleum Corp. No. 3 Thompson, 3,756-75 feet, 164 bbls. in three hours. Spandsco Oil & Refining Co. No. 2 Alford, 3,570-72 feet, 25 bbls. per hour. Stanolind Oil & Gas Co. No. 1 Thompson, 3,746-3,809 feet, 42 bbls. per hour. Tide Water Associated No. 14 Pool, 3,695-3,730 feet, 12 bbls. in 15 minutes.

Upshur County

General American Oil Co. No. 5-A Victory, 3,618-20 feet, 25 bbls. per hour. Gulf Oil Corp. No. 16 Ray, 3,584-93 feet, 24 bbls. per hour. P. H. Pewitt No. 5-A Sobey, 3,748-49 feet, 20 bbls. per hour.

EAST CENTRAL TEXAS COMPLETIONS

Anderson County

Barnsdall Oil Corp. No. 1 H. C. Swanson, temporarily abandoned 5,245 feet, 10 miles east of Palestine. F. H. E. Oil Co. No. 1 Morrow, 5,334-65 feet, 40 bbls. in 24 hours through 5/64-inch choke. H. L. Hunt No. 1 Smith, 5,282-89 feet, 32 bbls. in 24 hours through one-eighth inch choke. Tide Water Associated No. 2 Evans, 5,334-39 feet, 77 bbls. in 24 hours through 7/64-inch choke; No. 7 Ware, 3,904-4,093 feet, 103 bbls. in 24 hours through one-eighth inch choke.

Franklin County

Humble Oil & Refining Co. No. 3-A Dawson, 4,233-4,328 feet, 110 bbls. on pump.

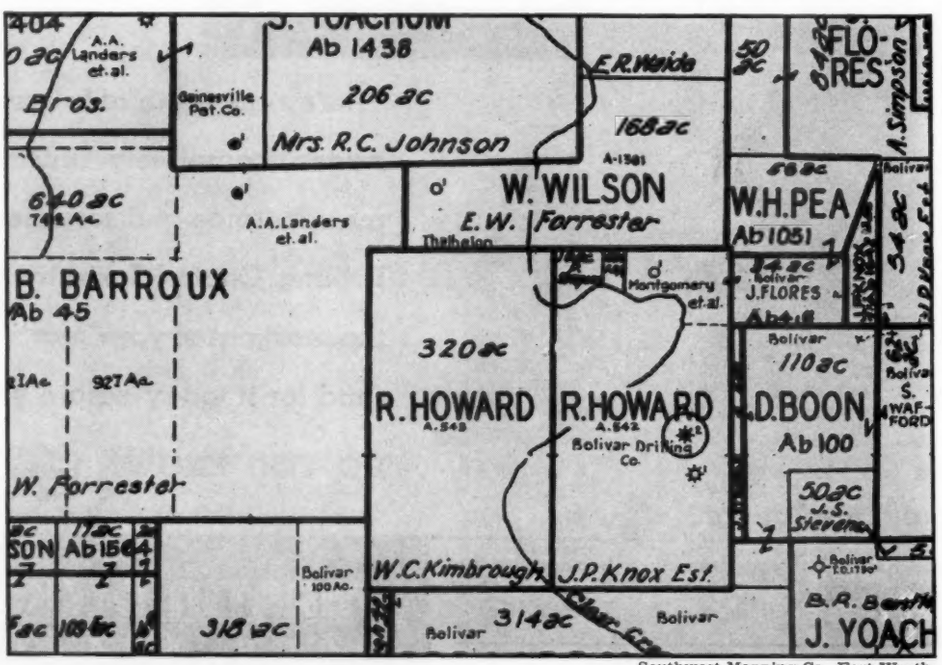
Freestone County

C. F. Lytle No. 1 R. Simmons, dry and abandoned 4,000 feet, elevation 432 feet, 1 mile south of Wortham.

Hopkins County

Hager and others No. 3 Pierce, 4,514-34 feet, 30 bbls.

(Continued on Page 120)



Southwest Mapping Co., Fort Worth

Oil-gas discovery 2 miles west of Bolivar in Denton County, and in the county's first oil producing area discovered by Landers and others two months ago

Kansas Developments

By
DAL DALRYMPLE

FIND NEW VIOLA LIME POOL IN MEDICINE LODGE SECTOR

A new Viola lime pool was opened in Barber County by Pryor & Lockhart, Inc., and Ranger Oil Co. at No. 1 Gant, C SE section 7-31-13w. It made a head flow of about 15 bbls. of oil after being shut in over night. Before the well was shut in, it was swabbed several times, with 1,000 feet of oil remaining in the hole when the last run was made. Gravity of the oil was 38 to 40 degrees. Production was from Viola lime at 4,433-38 feet, with 7-inch casing set at 4,428 feet. The wildcat is northwest of the Whelan pool, where a new producer recently was completed and is about 14 miles north and west of the Medicine Lodge oil and gas area. This strike gives Barber County its third oil producing district.

In Ness County, Newton Development Co. No. 1 Tenny, NW NW SE section 19-18-25w, wildcat discovery, had 3,500 feet of oil in the hole after being deepened 12 feet to total depth of 4,393 feet, and swabbed 50 bbls. an hour for four hours. It was to be acidized and tested. Production was from Mississippi lime.

The Bureau of Mines has recommended a July allowable production for Kansas of 195,600 bbls. daily, an increase of 4,900 bbls. over June.

An important wildcat test has been announced for Kiowa County, adjoining Barber County on the northwest and Clark County, where a new Viola lime pool recently was opened, on the northeast. It is the Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Pyle, nine miles northwest of Haviland on a 9,000-acre block.

Rice County

Thirteen Rice County completions included seven oil wells and six failures.

M. D. Scruggs No. 1 Bolton, SE SE NW section 31-18-7w, Geneseo sector, pumped 1,102 bbls. of oil in 24 hours from Siliceous lime at 3,212-16 feet, total depth.

Bradley Oil Co. No. 8 Mitchell, NE SW SW section 32-19-10w, Silica district, had Siliceous lime at 3,296 feet, total depth 3,316 feet, and made potential of 1,776 bbls. of oil. Gulf Oil Corp. No. 2 Poncin, SW SW NE section 5-20-10w, found Siliceous lime at 3,328 feet, total depth 3,336 feet, swabbed 352 bbls. of oil in six hours, was acidized, pumped 371 bbls. in six hours and made potential of 1,336 bbls. Same company's No. 4 Schmidt, NE SW SE section 6-20-10w, topped Siliceous lime at 3,318 feet, was bottomed at 3,327 feet, swabbed 195 bbls. of oil in six hours, was acidized and made potential of 1,169 bbls. J. H. Tatlock No. 7 Berscheit A, NE SE SW section 6-20-10w, had Siliceous lime at 3,293-99 feet, total depth, was acidized, pumped 380 bbls. of oil in six hours and made potential of 1,372 bbls.

In the Hauschild-Saxman-Theede district, Garden & Haines No. 3 Gossman, SE SE NW section 9-21-7w, topped Conglomerate at 3,362 feet, Chat 3,371 feet, total depth 3,434 feet, plugged back to 3,431 feet, and pumped 15 bbls. of oil in 24 hours.

Dick Sage and others No. 5 Gossman, SW NW NW section 9-21-7w, found Conglomerate at 3,362-71 feet, total depth, flowed 1,015 bbls. of oil in six hours and made potential of 3,847 bbls.

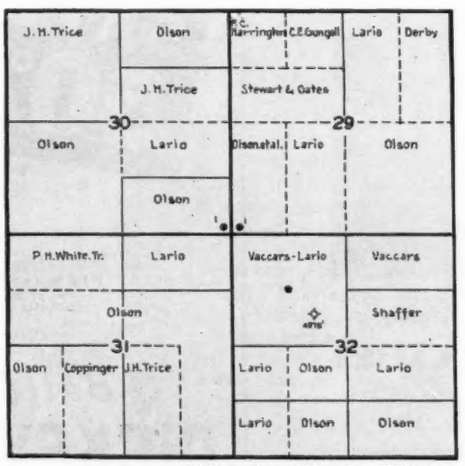
L. E. Douglass No. 1 Coyne, NE SE SE section 24-21-8, wildcat, topped Kansas City lime at 2,948 feet, Conglomerate 3,365 feet, Chat 3,386 feet, Viola lime 3,665 feet, Simpson 3,700 feet, had a hole full of water in Siliceous lime at 3,763-68 feet, total depth, and was dry and abandoned.

Hinkle and others No. 2 Schoeing, SW SE SE section 21-18-10w, had Siliceous lime at 3,258-66 feet, total depth, and was dry and abandoned. John Hanna and others No. 1 Fulton, NW NW NE section 24-19-6w, wildcat, topped Topeka lime at 2,290 feet, Kansas City 2,835 feet, Conglomerate 3,400 feet, Chat 3,450 feet, Siliceous 3,920 feet, had a hole full of water at 3,995-4,002 feet, and was dry and abandoned. Stanolind Oil & Gas Co. No. 1 Mooney, NE NE SW section 5-19-10w, wildcat, found anhydrite at 470 feet, Kansas City lime 2,996 feet, Conglomerate 3,275 feet, Siliceous lime 3,408 feet, total depth 3,470 feet, and was dry and abandoned. Ohio Oil Co. No. 2 Wood, SW NE NW section 3-20-10w, topped Siliceous lime at 3,352 feet, total depth 3,360 feet, had a hole full of water and was abandoned. Transwestern Oil Co. No. 1 West, SW SW NW section 17-20-10w, had Siliceous lime at 3,397-3,401 feet, total depth, plugged back to 3,140 feet and was shot, but was dry and abandoned.

New work in Rice County: Mid-Continent Petroleum Corp. No. 1 Hubenett, NW SW SW section 23-20-6w, cellar; Sinclair Prairie Oil Co. No. 1 Bolton, NW NE SW section 31-18-7w, building rig; Continental Oil Co. and Empire Oil & Refining Co. No. 2 Nickel, NW NW SW section 13-18-8w, an old well rigging up to deepen for water disposal; Continental Oil Co. and others No. 2 Lansing A, SE NE SW section 25-18-8w, building rig; same company's No. 1 Warner, NE NW NW section 6-19-7w, rigging up rotary; Gulf Oil Corp. No. 1 Lyons, NW NE NE section 18-20-9w, building rig.

Russell County

Eight oil wells were completed in Russell County, with two failures. S. A. Murphy and others No. 1 Deines, SE SE SW section 36-15-15w, wildcat, topped anhydrite at 957 feet, Topeka lime 2,875 feet, Kansas



Mid-Continent Map Co., Wichita.

Three wells have been completed in Whelan pool, township 31-11w, Barber County

City lime 3,167 feet, Conglomerate 3,390 feet, had slight showing of oil at 3,402 feet, found Siliceous lime at 3,451 feet, had a hole full of water at 3,471-76 feet and was dry and abandoned at 3,479 feet, total depth. Central Petroleum Co. No. 1 Novak, NE NE SE section 6-13-15w, topped Siliceous lime at 3,290 feet, had a hole full of water at 3,310-15 feet, total depth, and was dry and abandoned.

Empire Oil & Refining Co. No. 14 Crawford, NW SE SW section 2-14-15w, had Gorham sand at 3,296 feet, total depth 3,300 feet, and pumped 1,305 bbls. of oil in 24 hours.

A. H. Witt No. 3 Witt, NW NE SE section 3-14-15w, had Gorham sand at 3,294-3,315 feet, total depth, with a hole full of water; plugged back to 3,187 feet, was acidized and made potential of 2,219 bbls. of oil.

Empire Oil & Refining Co. No. 5 Sellens, SW cor. section 30-15-13w, Trapp area, had Siliceous lime at 3,281-83 feet, total depth, was acidized, pumped 1,058 bbls. of oil in 12 hours and made potential of 2,116 bbls. Derby Oil Co. and Reserve Development Co. No. 4 Michaelis, NW SW NW section 31-15-13w, had Siliceous lime at 3,264-68 feet, total depth, swabbed 160 bbls. of oil in three hours, was acidized, pumped 1,409 bbls. in 12 hours and made potential of 2,818 bbls. Gulf Oil Corp. No. 4 Hoffman, NW NE SW section 31-15-13w, topped Siliceous lime at 3,250 feet, was bottomed at 3,262 feet, swabbed 230 bbls. of oil in six hours, acidized and made potential of 1,624 bbls. Same company's No. 5 Michaelis, NW NE SW section 32-15-13w, found Siliceous lime at 3,319 feet, total depth 3,331 feet, swabbed 187 bbls. of oil in six hours, was acidized and made potential of 1,528 bbls.

Skelly Oil Co. No. 5 Neidens, SW NW SE section 32-15-13w, had Siliceous lime at 3,323-32 feet, total depth, bailed oil and water after two acid treatments, plugged back to 3,330 feet, reacidized, pumped 844 bbls. of oil in 12 hours and made potential of 1,688 bbls. Darby Petroleum Corp. No. 1 Michaelis, NE NE SE section 36-15-14w, had Siliceous lime at 3,279-88½ feet, total depth, was acidized, pumped 746 bbls. of oil in 12 hours and made potential of 1,498 bbls.

New operations in Russell County: Empire Oil & Refining Co. No. 16 Crawford, NW NW SW section 2-14-15w, rigging up; Central Petroleum Co. No. 1 Deckert B, NE SE NW section 30-12-15w, rigging up; W. I. Southern, Inc., No. 6 Sellens heirs B, NW SE NW section 30-15-13w, location; Gulf Oil Corp. No. 2 Mollie, NE SE SE section 25-15-14w, building rig; Darby Oil Corp. No. 3 Michaelis, NW NE SE section 36-15-14w, moving in material.

Estimated Daily Production

Estimated daily production of Kansas for the week ending June 19, and for the preceding week, was as follows:

	Barrels	
	June 19	June 12
Oxford City	1,775	1,850
Burrton	14,250	14,375
Ritz-Canton	5,575	5,675
Graber	2,675	3,575
Hollow-Nikkel	2,900	2,975
Lerado	2,875	2,650
Voshell	2,200	2,100
Wellington	2,875	2,900
Ellsworth County:		
Lorraine	4,475	4,100
Other pools	1,275	1,262
Rice-Barton counties:		
Bloomer	4,850	4,610
Chase	7,075	7,925
Geneseo	2,225	1,475
Raymond	2,225	2,450
Silica	22,650	22,225
Keesling	1,900	2,290
Hauschild	2,825	6,050
Miscellaneous Rice	10,115	8,180
Miscellaneous Barton	4,310	4,300
Russell County:		
Fairport	2,295	2,115
Gorham-East Gorham	2,370	2,265
Russell	2,310	2,016
Sullivan	7,850	7,605
Trapp	7,250	7,454
Miscellaneous Russell	6,220	5,905
Sedgwick County:		
Valley Center	1,230	1,303
Miscellaneous	3,090	3,057
Ellis County:		
Bemis	4,950	4,232
Miscellaneous	2,530	2,398
Kingman County	585	565
Stafford County	3,025	2,815
Greenwood County	9,700	9,650
Butler County	16,000	15,900
Other fields	25,895	25,378
Total Kansas	194,350	190,625

Ellis County

Republic Natural Gas Co. No. 1 Romine, NW cor. section 18-11-16w, Ellis County, found Siliceous lime at 3,285 feet, was bottomed at 3,290 feet, pumped 1,275 bbls. of oil in 17 hours, making potential of 1,724 bbls.

Empire Oil & Refining Co. No. 5 Bemis, SW SE SE

section 21-11-17w, in the fast growing Bemis pool, had Siliceous lime at 3,389 feet, total depth 3,412 feet, and pumped 2,021 bbls. of oil in 24 hours, down two hours.

Margay Oil Co. No. 4 Bemis C, SW SE SW section 22-11-17w, pumped 2,496 bbls. of oil in 24 hours from Siliceous lime topped at 3,516 feet, total depth 3,534 feet. Same company's No. 5 Bemis C, SE SE SW section 22-11-17w, had Siliceous lime at 3,444 feet, total depth 3,462 feet, and pumped 2,565 bbls. of oil in 24 hours.

Texas Co. No. 2 Bemis A, SE NE NE section 28-11-17w, topped Siliceous lime at 3,446 feet, total depth 3,470 feet, and pumped 2,679 bbls. of oil in 24 hours. Same company's No. 3 Bemis A, NW NE NE section 28-11-17w, pumped 2,095 bbls. of oil daily from Siliceous lime topped at 3,364 feet, total depth 3,382 feet.

Lario Oil & Gas Co. No. 3 Marshall, SW cor. section 31-11-17w, topped Siliceous lime at 3,685 feet, total depth 3,705 feet, was acidized three times, and pumped 1,000 bbls. of oil in eight hours, making potential of 2,716 bbls.

Carter Oil Co. No. 3 Staab, SE SE NW section 11-12-18w, found Siliceous lime at 3,649 feet, total depth 3,655 feet, pumped 200 bbls. of oil in five hours, was acidized and made potential of 1,002 bbls.

First reports of new work in Ellis County follow: Republic Natural Gas Co. No. 3 Romine, SW NW NW section 18-11-16w, cellar; Empire Oil & Refining Co. No. 1 Hall, NE cor. section 14-11-17w, wildcat, building rig; Margay Oil Co. No. 8 Bemis C, NE NE SW section 22-11-17w, drilling at 472 feet; Texas Co. No. 6 Bemis A, NW NW NE section 28-11-17w, building rig; Blackwell Oil & Gas Co. No. 1 Meier, NE SE SW section 36-11-17w, moving in material; Lario Oil & Gas Co. No. 1 Ball, NW NW NE section 8-12-18w, wildcat, location.

Barton County

A new producing area was opened in Barton County at Stanolind Oil & Gas Co. No. 1 Struder, SE SE SW section 26-16-13w, wildcat northeast of production in the Ainsworth pool. It topped anhydrite at 854 feet, Kansas City lime 3,154 feet, Siliceous lime 3,402 feet, total depth 3,412 feet, and pumped 675 bbls. of oil in 24 hours. Same operator's No. 1 National Bank, SE SE SW section 26-16-13w, wildcat, was an abandoned location.

Texas Co. No. 7 Moran, SW NE SW section 25-17-11w, in the Bloomer area, had Siliceous lime at 3,313-17 feet, total depth, was acidized and pumped 482 bbls. of oil in 24 hours. Spencer & Yarnell No. 1 Patzner, NE NE SW section 36-17-11w, found Siliceous lime at 3,248-50 feet, total depth, pumped 1,577 bbls. of oil in 12 hours, making potential of 3,150 bbls.

Schermerhorn Oil Co. and others No. 1 Bird, NE cor. section 33-18-15, produced 36,500,000 feet of gas after plugging back to 3,533 feet from 3,535 feet, total depth, and was completed. Same company's No. 1 Haas, NE NW SE section 30-18-15w, was bottomed at 3,657 feet, plugged back to 3,541 feet and shot, produced 1,000,000 feet of gas, but was abandoned.

Morgan & Flynn and others No. 1 Essemiller, SE SE NE section 16-19-14w, had Granite Wash at 3,725 feet, and was dry and abandoned at 3,748 feet, total depth. Silverstein & George and others No. 1 Otte, SE SE NW section 2-19-14w, wildcat, was an abandoned location.

Stanolind Oil & Gas Co. No. 2 Werries, C NW SW section 10-20-11w, had Siliceous lime at 3,299 feet, total depth 3,308 feet, plugged back to 3,305 feet, acidized three times, and pumped 178 bbls. of oil in 24 hours, cutting 2 per cent water.

New operations reported in Barton County were as follows: Gulf Oil Corp. No. 2 Sessler, SE NE SW section 24-20-11w, building rig; Magnolia Petroleum Co. No. 9 Roetzel, SE SW NE section 24-20-11w, rig; Heimerich & Payne and others No. 1 Sessler, SW SW SE section 29-20-11w, wildcat, cellar; Transwestern Oil Co. No. 3 Meyers, SE NE NE section 13-17-11w, building rig; Stanolind Oil & Gas Co. No. 1 Redetzke, SW SW SE section 26-16-13w, building rig; same company's No. 1 Zugg, NE NE NW section 35-16-13w, building rig.

Ellsworth County

Orville Lee No. 1 Larkin, NW cor. section 15-16-8w, wildcat in Ellsworth County, topped anhydrite at 455 feet, Topeka lime 2,275 feet, had a hole full of water at 2,530-50 feet, topped Kansas City lime at 2,620 feet, Simpson 3,040 feet, Siliceous lime 3,052 feet, had a hole full of water at 3,065-73 feet and was dry and abandoned at 3,080 feet, total depth.

Continental Oil Co. and Empire Oil & Refining Co. No. 3 Rolfs, NE NE NW section 34-17-8w, had Siliceous lime at 3,258-65 feet, total depth, and pumped 1,403 bbls. of oil in 24 hours.

Gulf Oil Corp. No. 6 Grizzell, NE SW NW section 31-17-10w, had Siliceous lime at 3,235-45 feet, total depth, pumped 1,110 bbls. of oil in 12 hours, was acidized and made potential of 2,222 bbls.

Continental Oil Co. and Empire Oil & Refining Co. No. 1 Ploog A, SE SE SW section 27-17-8w, was building rig.

Reno County

Carter Oil Co. No. 4 Hogan, SE SW SW section 19-24-4w, Reno County, Burrton district, topped Chat at 3,329 feet, total depth 3,389 feet, swabbed 28 bbls. of oil in two hours, was acidized and made potential of 365 bbls. of oil, with 59 bbls. of water.

Haynes Drilling Co. and others No. 4 Mueller, NE SE NW section 30-24-4w, had Chat at 3,343 feet, was bottomed at 3,400 feet, acidized and made potential of 509 bbls. of oil, with 30 per cent water.

Magnolia Petroleum Co. No. 5 Harris, SW NW SW section 9-26-4w, was a location. Skelly Oil Co. No. 3 Smith, SW SE SW section 24-24-8w, was a location.

McPherson County

Continental Oil Co. and others No. 2 Huntsman, NE NE NW section 29-21-1w, McPherson County, topped Hunton lime at 3,275 feet, total depth 3,323 feet, acidized and pumped 644 bbls. of oil in 24 hours.

Harvey County

Hollow & Bradley Brothers No. 1 Neufeldt, NE SE NW section 17-22-1w, Harvey County wildcat, found Chat at 2,975 feet, Misener sand 3,360 feet, Hunton lime 3,364 feet, Viola lime 3,473½ feet, Simpson 3,510 feet, Siliceous lime 3,689-3,698 feet, total depth, and was dry and abandoned.

Olson Drilling Co. and Lario Oil & Gas Co. No. 1 Murphy, C W half NW SE section 30-23-3w, topped Chat at 3,272 feet, total depth 3,361 feet, flowed 81

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bbls. of oil in 24 hours, was acidized and flowed 454 bbls. of oil, with 11 per cent water, in 24 hours.

Cowley County

Murta & Wilson opened a new producing area in Cowley County at No. 1 Turner, NE NE NW section 30-32-6e, wildcat. It flowed sand at 2,220 feet, total depth 2,247 feet, and pumped and flowed 509 bbls. of oil and 20 to 25 bbls. of water in 24 hours.

McKnab No. 1-A Files, SE SE NE section 20-32-5, had Bartlesville sand at 3,069-79 feet, total depth, and flowed 250 bbls. of oil in 24 hours.

New work in Cowley County: Fred Moore No. 1 Boyer, NE cor. section 8-33-7, location; Texas Co. No. 1 Cranston, SE SE SW section 19-32-6, location; Deep Rock Oil Corp. No. 1 Cranston, SE SE SW section 19-32-6, location; Deep Rock Oil Corp. No. 1 Cranston, NW NW NE section 30-32-6, moving in material.

Sumner County

Two oil wells were completed in the Wellington area, Sumner County. Stelbar Oil Corp. No. 4 Rothrock, NW NW NE section 4-32-1w, topped Chat at 3,650 feet, total depth 3,691 feet, was acidized and flowed 1,565 bbls. of oil in 24 hours.

Texas Co. No. 5 Carr, SE NE NE section 5-32-1w, found Chat at 3,630 feet, total depth 3,683 feet, was acidized and swabbed and flowed 686 bbls. of oil in 24 hours.

First reports of new Sumner County work: Stelbar Oil Corp. No. 5 Rothrock, NE NW NE section 4-32-1w, building rig; Transwestern Oil Co. and Darby Petroleum Corp. No. 2 McKee, NE NE SE section 5-32-1w, building rig.

Butler County

Saco Oil Co. No. 1 Townsite, NW NW NE section 3-26-5, Butler County, had a hole full of water in Siliceous lime at 2,683-88 feet, total depth, and was dry and abandoned.

Western Kansas Oil & Refining Co. and others No. 1 Archer, NW NW NE section 3-26-5, was abandoned at 1,325 feet, total depth.

New work in Butler County: National Refining Co. No. 2 McCullough, NW NW SE section 1-28-6, moving in machine; Saco Oil Co. No. 1 Cotton, SW SW SE section 16-28-6, wildcat, ponds; Jayhawk Oil Co. No. 2 Fitch, NW NW NE section 5-25-4, machine; Phillips Petroleum Co. No. 3 Moore, NE NW SE section 1-25-3, location.

Greenwood County

Phillips Petroleum Co. and others No. 7 Aagard A. C SE NW section 14-24-9, Greenwood County, was completed as a water disposal well at 2,173 feet, total depth.

Katz Oil Co. No. 1 Christy, SW SW SE section 12-26-9, was drilling at 435 feet. Lyke and others No. 5 Davis, NE SE SE section 6-24-12, was rigging up machine.

Chautauqua County

Berger and others No. 1 Patterson B, SW SW SE

(Continued on Page 139)

Oklahoma Fields

(Continued from Page 100)

tion 3-17-7, an old well, rigging up to deepen; Texas Co. No. 7 McIntosh, C N half N half SW section 3-17-7, an old well, drilling by bailer at 3,591 feet; Shaw, Doak & Hughes No. 2-A Ingalls, NE SW SE section 24-17-7, drilling at 1,040 feet; Doak & Hughes No. 1-A Micco, C NE SW section 24-17-7, digging cellar; L. B. Jackson No. 4 Kelly, NE SE NW section 2-17-8, machine; same operators No. 1 Thatcher, SE NW SW section 2-17-8, total depth 2,475 feet, fishing; Sinclair Prairie Oil Co. No. 2 Hope B, NW SW SW section 3-17-9, drilling at 1,460 feet; Freeland & Slyman No. 1-A Willard, SE NW NW SE section 11-17-9, rigged up and shut down; Liuk Oil Co. No. 11 Jones, CEL NE section 32-18-7, an old well, drilling at 2,380 feet.

Tulsa County

Johnson Oil Refining Co. No. 3 Grimes, NE SE SW section 31-19-10, Tulsa County, swabbed and flowed 180 bbls. of oil in 24 hours after a shot at 2,277 feet, total depth. Same company's No. 4 Grimes, NE NE SW section 31-19-10, total depth 2,287 feet, was shot, and swabbed and flowed 175 bbls. of oil in 24 hours.

Other Tulsa County completions: Theo. Sauter No. 1-A Coonhead, SW SW NE section 12-17-12, total depth 1,335 feet, shot, pumped 3 bbls. of oil daily. S. W. Anthony No. 2 Gilcrease, C W half SW SW section 34-17-12, bailed 15 bbls. of oil and 4 bbls. of water daily from Wilcox sand at 2,279-84 feet, total depth. Sheldon Brothers No. 2-A Donaldson, C S half NE NW section 13-18-12, Arbuckle lime 1,959-2,082 feet, total depth, plugged back to 2,040 feet, acidized, pumped 20 bbls. of oil daily. C. L. Heter and others No. 1 Hodges, NE NW NE section 9-19-12, total depth 1,275 feet, produced 300,000 feet of gas.

Swift Brothers No. 1-A Bridges & Meyers, CSL NE section 14-19-10, was drilling at 400 feet. Johnson Oil Refining Co. No. 5 Grimes, NE SW NE SW section 31-19-10, was drilling at 520 feet.

Muskogee County

Conrad Lambert No. 2 Summers, C E half NE NW section 6-15-15, Haskell district, Muskogee County, had Glenn sand at 1,283 feet, total depth 1,291 feet, and flowed 108 bbls. of oil in 24 hours.

Jack Sommers No. 2-A Jefferson, NE SW NE section 6-15-15, was dry and abandoned at 1,350 feet, total depth, with a hole full of water. Joe Paul and others No. 1 Monday, C E half NE NE section 9-13-16, was dry and abandoned in sand at 1,778-1,826 feet, total depth.

H. W. Lampton No. 1 Anthis, SE SW SW section 24-14-17, was drilling at 225 feet.

Payne County

Sun Oil Co. No. 1 Worth, NW SW NE section 6-19-5, Payne County, had Wilcox sand at 3,709 feet, total depth 3,722 feet, plugged back to 3,715 feet, was shot and swabbed 223 bbls. of oil in 24 hours.

Mulberry Oil Co. No. 2 O'Herren, SW NW NE section 5-17-5, was dry and abandoned at 4,123 feet, total depth. R. P. Kemzey No. 1 State, NW NW SE section 16-18-3e, wildcat, was dry and abandoned at 3,910 feet, total depth. It originally was listed as Riddle No. 1 Van Zandt.

Garvin County

Cox & Hamon No. 3 Harris, SE SW NW section 32-1n-3w, Tussy area, Garvin County, topped sand series at 2,705 feet, total depth 3,278 feet, plugged back to 3,150 feet, and flowed 177 bbls. of oil daily.

Same operators' No. 1 Rock, SW SW NW section 32-1n-3w, was waiting on cement at 59 feet. Skelly Oil

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Co. No. 3 Gross, NW NE SW section 32-1n-3w, was building derrick.

Carter County

Kewanee Oil & Gas Co. No. 10 Ferguson, NE SE NW section 6-4s-3w, Carter County, pumped 38 bbls. of oil daily at 1,130 feet, total depth. Carter Oil Co. No. 42 Ward, SW NE NW section 6-4s-3w, total depth 1,128 feet, was shot and pumped 20 bbls. of oil daily. Magnolia Petroleum Co. No. 70 Richards, SW NW NE section 6-4s-3w, was bottomed at 1,173 feet and pumped 20 bbls. of oil daily. Ben G. Barnett No. 1-A Lycus, SW SE NE section 14-1s-3w, was dry and abandoned at 2,780 feet, total depth.

New work in Carter County: Simpson & Fell No. 2 Davis, C S half NW NW section 9-2s-2w, location; Kewanee Oil & Gas Co. No. 6 Ott, NW SW NE SE section 4-4s-3w, machine; same company's No. 16 Hickman, NW NE SE section 6-4s-3w, location; Sinclair Prairie Oil Co. No. 24 Lowman, SW NW SE section 9-4s-3w, machine.

Marshall County

Centorp Oil Corp. No. 1 Ayers A, NE NE SE section 25-7s-5, Marshall County, an old well, was deepened from 518 feet to 534 feet and pumped 1 bbl. of oil. Same operator's No. 4 Ayers A, SW NE NE SE section 25-7-5, an old well, was deepened from 512 to 520 feet, and pumped 1 bbl. of oil.

Stephens County

Wilkins and others No. 1-A Robertson, SW NE NE section 15-2s-5w, Stephens County, pumped 5 bbls. of oil daily at 896 feet, total depth. Carter-Ring No. 12 Arm, NE NW NE section 26-1s-5w, was dry and abandoned at 668 feet, total depth. George L. Pace and others No. 14 Payne, SE NW NW section 28-2s-7w, was abandoned at 1,762 feet, total depth. Gavin & Kolb No. 1 Bond, C N half NW NE section 36-2s-7w, wildcat, was abandoned at 2,004 feet, total depth, in shale.

George L. Pace and others No. 11 Allen, NE section 3-2s-8w, was drilling at 163 feet. L. A. Wilkins No. 2 Robberson, SE NE NE section 15-2s-5w, was rigging up machine. McGraw Oil Co. No. 13 Elmore, SW SW NW section 24-2s-4w, was rigging up machine. Carter-Ring No. 13 Arm, NE NE NW NE section 26-1s-5w, was drilling at 380 feet.

Jefferson County

Bridwell Oil Co. No. 1-D Spring, SE NE NE section 25-6s-6w, Jefferson County, was dry and abandoned in lime at 2,086-2,126 feet, total depth.

Farlyn Oil Co. No. 45 Seay, NW SW SE section 3-7s-5w, was rigging up rotary.

Comanche County

E. E. Reynolds and others No. 2-A Truitt, NW SE SE section 26-2n-11w, Comanche County, was dry and abandoned at 470 feet, total depth.

Clyde Rhodes No. 1-A Green, SE SE SW section 2-1n-13w, wildcat, was rigging up rotary.

Tillman County

D. S. Smith No. 1-A Hammill, NE NW NW section 6-5s-15w, wildcat in Tillman County, had a difficult fishing job, junked hole and was abandoned at 2,425 feet, total depth.

Kiowa County

John Hooser No. 1-A Price, SW NW NW section 25-7-21w, Kiowa County, was dry and abandoned at 1,140 feet, total depth. Gold Band Oil Co. No. 1 Parrish, NW SW SW NW section 3-6-15w, an old well, was abandoned after deepening from 310 feet to 715 feet.

Beckham County

Carter Oil Co. No. 1 Bingham, SW NE NE section 21-8-26w, Beckham County wildcat, had Granite Wash at 2,120 feet, total depth 2,214 feet, and was dry and abandoned.

More New Operations

In Cotton County, Shasta Oil Co. No. 5 School Land, NW SE NE section 36-1s-10w, was rigging up rotary.

In Caddo County, Magnolia Petroleum Co. No. 8 Lackey, SW NW NW section 11-5-9w, had dug cellar and pits. J. B. Nichols No. 2 Rigney, NE NE NW section 12-5-9w, was waiting on cement at 90 feet.

In Garvin County, Hollenbeck & Davis No. 1 Burch, SE SE SW section 3-3n-1w, was a wildcat location.

In Logan County, Shell Petroleum Corp. and others No. 1 Waddle, SW SE NW section 36-15-4w, was a wildcat location.

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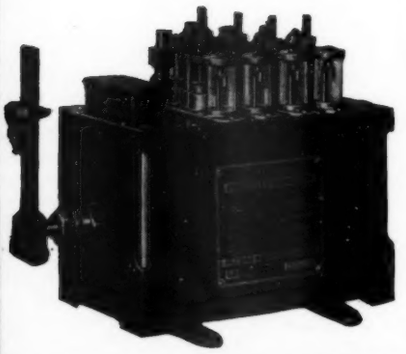

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By STAFF CORRESPONDENT

200-BBL. SHALLOW WELL IN CLINTON COUNTY, ILLINOIS

MATTOON, Ill., June 21.—The Pure Oil Co. has officially completed its No. 1 Travis in section 33-3n-8e, Clay County which started at 2,643 bbls. a day early in the month. It is steadily producing about 1,300 bbls. a day of 40.8 gravity crude with an accompaniment of about 535,000 feet of gas from McCloskey sand at 2,941-64 feet. The oil is being piped to Clay Center and shipped by tankcar from that point to the Pure Oil Co.'s refinery at Heath, Ohio.

The Adams-Louisiana Oil Co. has changed its name to the Adams Oil & Gas Co. It is the discoverer of the Patoka pool in Marion County and was the first company to find oil in commercial quantity in this year's drilling campaign in the Illinois Coal Basin.

The best showing made by a well in the past week was in Clinton County where a test not yet completed flowed 200 bbls. a day following a shot. It was being rigged up to pump.

A number of new locations were announced but aside from No. 1 Travis, above mentioned, no wells were completed.

Marion County

New locations in Marion County include Carter Oil Co. No. 1 Nedsger, C W half NW SE section 4-4n-3e; Adams Oil & Gas Co. No. 7 Merryman, CNL NW NW section 28-4n-1e, set 8⅝-inch casing at 91 feet; and Hempen & Burgess, No. 1 Miller, C NW NE section 34-4n-1e, a wildcat to be drilled with cable tools.

Sunflower Oil & Gas Co. No. 1 Murfin, NE cor. NW NE section 33-4n-1e, was shut down at 1,055 feet. Hempen & Burgess No. 1 Joliff, NE NW SE section 28-4n-1e had a water sand at 1,155 feet and was drilling at 1,620 feet, with 6⅝-inch casing set at 1,217 feet. Hempen & Burgess No. 1 Allison, CNL NW SW section 33-4n-1e, was a hole full of water at 1,427 feet, and was drilling ahead. Adams Oil & Gas Co. No. 1 Sam Pugh, NW cor. SE section 29-4n-1e, total depth 1,655 feet, was plugged back to 1,588 feet and shot with 10 quarts at 1,570 feet and made 40 bbls. of oil the first day thereafter. Later it made 38 bbls. of oil and 9 bbls. of water. Adams Oil & Gas Co. 1 Davidson, CNL SW SW section 21-4n-1e, which had a hole full of water at 1,602 feet, recemented with 171 sacks, in a squeeze job, and was getting ready to drill plug. Same company No. 2 Davidson, SW cor. SW SW SE section 21-4n-1e, had Benoist sand at 1,439 feet with poor saturation and a small showing of salt water and was drilling at 1,462 feet. Adams Oil & Gas Co. No. 6 Merryman, CWL SE SW section 21-4n-1e, was shot at 1,414-28 feet, and oil rose in the hole 375 feet. The crew was cleaning out. Adams Oil & Gas Co. No. 1 Allison, NW cor. NE NW SW section 33-4n-1e, set 4-inch casing at 1,260 feet. Schlassberg & Sigel No. 1 Roddy, SW cor. SE SW section 20-2n-3e was drilling at 960 feet. Hempen & Burgess No. 1 Jeff Smith, NW NW SE section 28-4n-1e, had Benoist sand at 1,443-51 feet and had 900 feet of oil in the hole. The crew was underreaming 6⅝-inch casing to 1,405 feet. Illinois National Oil Co. No. 1 City of Patoka, NW NE SW section 28-4n-1e was shut down at 1,322 feet. Wiser Oil Co. was running 5⅜-inch casing to 1,630 feet in No. 1 Seth Martin, NW SE NW section 27-4n-1e, and was drilling at 825 feet in No. 1 Brockman, SW cor. NW NW SE section 22-4n-1e. Frank A. Frederick No. 1 Allen C N half section 28-4n-1e was drilling at 1,175 feet.

Bond County

Whitehead & Morey No. 1 Polland in NW SE SW section 26-6n-2w, Bond County, passed through Oolitic lime at 1,220-52 feet and was shut down at 1,311 feet.

Clay County

Pure Oil Co. No. 1 Sarah Bechtel, C NE SW NW section 33-3n-8e, Clay County, reduced the hole from 8¾-inch to 6¼-inch at 2,916 feet. A core was taken at 2,940-67 feet and 14 feet of saturated sand was recovered. At 2,957-64 feet saturated soft porous Oolitic lime was recovered, total depth 2,967 feet. Wicklund Development Co. made a location for a wildcat cable tool test, No. 1 Brissenden, SE SE SW section 29-3n-8e. Pure Oil Co. made a location for No. 1 Nicholas Moseley, C SE SW NE section 33-3n-9e and for No. 2 Sarah Bechtel, C SW SW NE section 33-3n-8e, and was moving in to start No. 1 A. Francis, C SE NE NW section 33-3n-8e.

Fayette County

Beaton & Ryer were drilling at 200 feet in No. 1 Thompson, NW NW NE section 20-4n-1w, Fayette County, with 12-inch casing set at 70 feet.

Randolph County

John E. Mabee and others had tools stuck in the hole in No. 1 Wilson, 330 feet from E line and 675 from S line of NE quarter section 3-4s-5w, total depth 702 feet.

St. Clair County

A. J. Colgan No. 1 Reichert, NW SW SW section 18-1s-7w, St. Clair County, was drilling at 1,700 feet.

Clinton County

Santa Fe Oil Co. has a good well, still uncompleted, in No. 1 Robbin, SE SW SE section 5-1n-3w, Clinton County. It was shot with 20 quarts of nitroglycerin at 975-989 feet and flowed 200 bbls. in 24 hours. It was being rigged up to pump. Timberlake Oil Co. No. 1 Bergman, SE NW SW section 8-1n-3w was shot with 20 quarts in sand topped at 957 feet and the hole filled with water. It was drilling at 970 feet. Patoka Petroleum Co. No. 1 Ducomb, C SE SE NW section 13-3n-1w, has Stein sand at 1,376 feet with a small showing of oil and was drilling at 1,428 feet.

Wayne County

Pure Oil Co. No. 1 Brach, NW SW SW section 26-1n-7e, Wayne County had sandy lime at 3,059-73 feet; a showing of oil at 3,073-3,103 feet; Oolitic lime saturated at 3,115-18 feet, total depth 3,119 feet. The well swabbed 60 bbls. of oil in 24 hours. Pure Oil Co. will drill ahead in No. 1 Stella Billington, SE SE NE section 27-1n-7e, which swabbed oil and water at a total depth of 3,212 feet.

Perry County

H. H. Forrester was drilling at 4,963 feet in No. 1 Fee, C W half SW NW section 11-3n-12w, Perry County.

Clark County

National Consumers Oil Co. No. 1 B NW NE NW section 21-11n-12w, Clark County, was drilling at 1,720 feet.

OHIO DEVELOPMENT

FINDLAY, Ohio, June 21.—The largest producer completed in the Ohio field this past week was the Preston Oil Co. No. 1 Lloyd Bailey, in section 22, Union Township, Knox County. This test, which was drilled through the sand at 3,122-72 feet, had a production of 125 bbls. the first 24 hours after a shot. A short distance from the Bailey well, the same company is building a rig for the second test on the A. J. Jones property. In the same section, Hulse-Kuntz, Inc., is rigged up for a test on the L. R. Stone property.

In the Lima field, section 22, Blanchard Township, Putnam County, Brown & Co. No. 3 Federal Land Bank was drilled through the Trenton sand at 1,330-38 feet and had an initial production of 24 bbls. of oil and 30,000 feet of gas. The same operators are rigged up for No. 4 on the same property. In Wood County, section 28, Perry Township, Johnson & Co. have abandoned the test on the J. Luman farm. This test was drilled through the Trenton at 1,185-1,482 feet, where it made a small show of oil and gas.

National Smelting Co. No. 1 Sub-Division, in Lot 306 Newburg Township, Cuyahoga County, has been completed with an estimated production of 5 bbls. the first 24 hours.

In Licking County, section 1, Licking Township, Wehrle Gas Co. has completed the test on the Frank Woolard property as a small gas well. This test was completed below the Cinnamon sand at 1,340-56 feet and gauged 140,000 feet of gas after a shot. In Location 7, Hanover Township, Pure Oil Co. has staked a loca-

(Continued on Page 126)

It was a chilly day in the Patoka field, Marion County, Illinois, when this picture was taken of J. H. Campbell, Core Laboratories, Inc., Tulsa; Faun W. Freeborn, Jr., general superintendent of Adams Louisiana Oil Co., Houston, Tex., and Bates White, general superintendent of Felmont Corporation, Houston, Tex. The Adams Louisiana company recently changed its name to Adams Oil & Gas Co.

California Field Report

By
L. P. STOCKMAN

WILMINGTON ADDS 12 WELLS TO RAPIDLY GROWING TOTAL

LOS ANGELES, Calif., June 21.—Development work in California is continuing at a high rate and with numerous new wells scheduled for the Wilmington and Santa Maria Valley fields it appears probable development work will be substantially in excess of that undertaken in any year since 1930. Opening of the Long Beach section of the Wilmington field by removal of drilling restrictions, and discovery a short time ago of a new productive area west of the Santa Maria Valley field, together with drilling operations in older proved fields, are expected to result in a substantial gain over similar work undertaken in 1936. Drilling operations during the current year and the number of new wells completed are far ahead of similar activities in the same period last year.

Drilling in the Wilmington field resulted in completion of 12 wells during the week and another large group of potential producers is expected to be completed soon. Union Pacific Railroad Co. and Royalty Service Corp. headed the list by completing three wells each. The former's new wells were Nos. 12, 24 and 30. No. 12 Offset was brought in flowing 2,047 bbls. of exceptionally clean 25.1 gravity oil and 400,000 feet of gas per day through a 31/64-inch bean. It was bottomed at 3,898 feet and finished with 383 feet of 6⅝-inch liner including 229 feet of perforated. The well was cemented through perforations at 3,662 feet. Union Pacific Railroad Co. No. 24 was brought in flowing 374 bbls. of relatively clean 16.9 gravity oil through a 24/64-inch bean from 3,513 feet. This new producer was finished with an 8⅝-inch combination string including 186 feet of 60-mesh screen and was cemented through perforations at 2,708 feet. Union Pacific No. 30 was bottomed at 3,145 feet and was finished with 609 feet of 8⅝-inch liner carrying perforations at 2,561-2,832 feet, 2,891-2,971 feet and at 3,042-3,138 feet. It registered an initial daily production of 510 bbls. of 18.9-gravity oil but is expected to show increased production within the next day or so.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

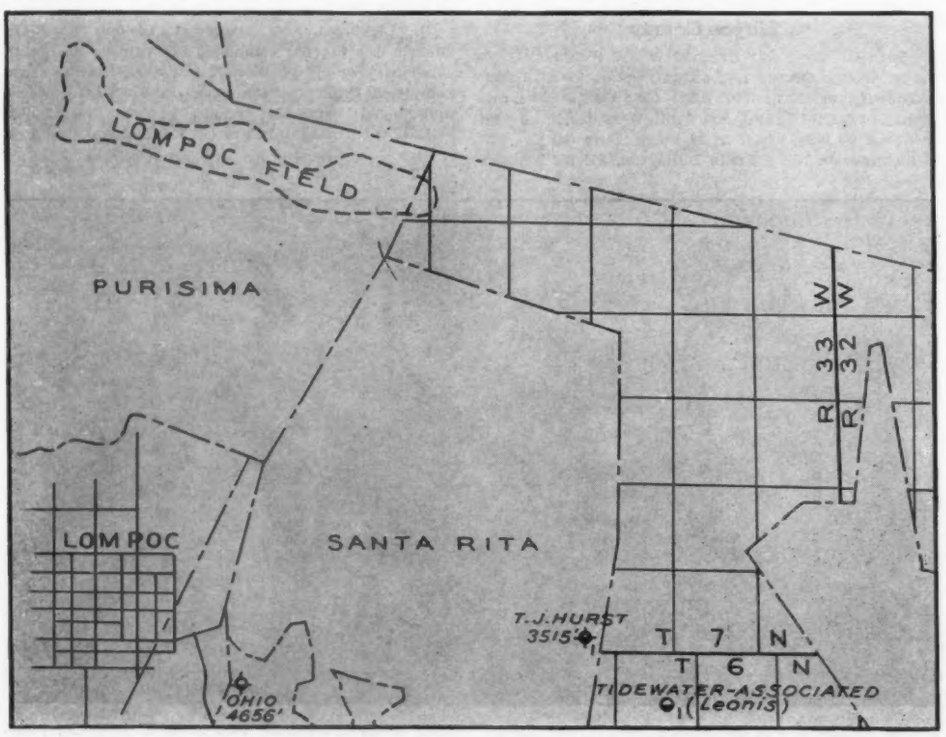
	June 10		June 3			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	176,726	151,541
Gasoline	.....	.....	127,494	18,213	1,426,970	2,868,916
Kerosene	.....	.....	.....	.....	198,231	643,609
Foreign exports:						
Crude oil	69,969	9,996	341,961	48,852	5,761,553	4,323,897
Fuel oil	185,006	26,429	363,977	51,997	6,206,279	4,571,309
Diesel and gas oil	80,221	11,446	192,332	27,476	3,088,976	2,643,931
Gasoline	37,048	5,293	462,293	66,042	3,344,640	3,108,354
Kerosene	.....	.....	35,744	5,106	969,369	495,812
Other unfinished oil	.....	.....	.....	.....	402,700	16,894
Coastwise-domestic:						
Crude oil	158,108	22,587	312,624	44,661	3,090,891	3,278,879
Fuel oil	356,286	50,897	312,685	44,669	6,665,832	3,900,539
Diesel and gas oil	6,186	884	53,234	7,605	1,052,089	519,927
Gasoline	407,472	58,210	238,759	34,108	6,008,940	5,788,504
Kerosene	.....	.....	20,143	2,878	89,702	100,398

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	152,932	.....
Gasoline	.....	.....	.....	.....	25,778	147,054
Asphalt	75,611	10,801	.....	.....	141,401	68,586
Lubricants	.....	.....	3,010	430	9,847	27,673
Foreign exports:						
Crude oil	150,378	21,483	111,786	15,969	1,391,317	1,321,047
Fuel oil	22,640	3,234	185,631	26,519	934,788	1,392,424
Diesel and gas oil	18,280	2,611	172,437	24,634	1,261,224	489,314
Gasoline	35,592	5,085	11,584	1,655	2,472,822	1,503,666
Kerosene	1,290	184	.....	.....	302,927	389,174
Lubricants	.....	.....	.....	.....	263,364	138,655
Coastwise-domestic:						
Fuel oil	168,753	24,108	38,610	5,516	2,809,962	3,383,786
Diesel and gas oil	39,577	5,654	75,187	10,741	395,011	316,875
Gasoline	125,138	17,877	90,172	12,882	1,951,700	2,260,381
Kerosene	2,972	425	.....	.....	75,066	69,401

New Completions

Royalty Service Corp. completed No. 1-B Santa Fe at 3,615 feet flowing 572 bbls. of 18.4-gravity oil daily. The company's No. 1-B Nelson was finished flowing 238 bbls. of clean 19.1-gravity oil daily from 3,315 feet after the hole had been completed with 340 feet of 7-inch liner including 307 feet of perforated. No. 469-1 Gilmore was completed flowing 293 bbls. of 19.2-gravity oil daily from 3,350 feet following completion of the hole with 355 feet of 7-inch liner including 309 feet of 80-mesh screen. Pacific Western Oil Co. completed its second producing well on the Petsec lease when No. 1 was brought in flowing 182 bbls. of 18.5-gravity oil per day from 3,430 feet. This well carries 331 feet of 6⅝-inch liner including 290 feet of 80-mesh screen. Ring Oil Co. completed No. 4 Wilmington flowing 785 bbls. of exceptionally clean 17.6-gravity oil per day from 3,609 feet. This producer has 709 feet of perforations opposite the productive formation. General Petroleum Corp., discoverer of the Wilmington field, completed No. 6 Ford flowing 1,920 bbls. of very clean 25.4-gravity oil daily through a 28/64-inch bean. No. 6 Ford was bottomed at 3,905 feet and has 796 feet of perforations opposite the productive formation. No. 12 Wilmington of A. T. Jergins Trust has been completed flowing 280 bbls. of 17.6-gravity oil initially from 3,425 feet. It was originally carried down to 3,483 feet but was plugged back to the completion depth and finished with 428 feet of 8⅝-inch liner including 402 feet of 60 mesh.



Tide Water Associated Oil Co. is starting a wildcat on the Leonis property in the the Santa Rita hills in section 3-6-33, southeast of the Lompoc field of Santa Barbara County

Third Productive Zone

General Petroleum Corp. has apparently discovered a third productive zone in the Wilmington field, although the deep test in question, No. 3 Ford, has not been completed. This well, bottomed at 5,355 feet and plugged back to 5,050 feet, on a preliminary production test a few days ago was brought in flowing 273 bbls. of clean 29.1-gravity oil daily. The company is testing this lower zone by stages and the well was killed to proceed with additional tests. It is significant to note that No. 3 Ford in the third zone has produced an unusually light gravity oil for this field, where the average gravity ranges between 15 and 20 degrees A.P.I. General Petroleum is starting 10 wells in the Wilmington field, including five on the Terminal lease, on which the discovery well was drilled. F. C. Hall, Inc., No. 484-1 has been completed flowing 309 bbls. of relatively clean 19.1-gravity oil per day from 3,324 feet. This well, finished with 337 feet of 6⅝-inch including 304 feet of 80-mesh, sanded up subsequent to completion and is being cleaned out. Alford Development Co. No. 2 Classification Yards

was completed pumping 70 bbls. of 14.7-gravity oil per day from 3,740 feet.

El Segundo

The El Segundo field of Los Angeles Basin is expected to register a consistent decrease in drilling operations due to the unsatisfactory production of several wells in the central part of the field. Republic Petroleum Corp., discoverer of the field, has temporarily concluded drilling operations, as its No. 8, located in close proximity to the Texas Co.'s Security lease and an offset to No. 1 Security which was completed flowing 3,720 bbls. per day, due to unsatisfactory production. Republic Petroleum No. 8 El Segundo failed to flow and was completed on the beam pumping 180 bbls. of 28.5-gravity oil per day from 7,408 feet.

Round Mountain

In the Round Mountain field of Kern County, Shell Oil Co. has completed No. 14 Freeman pumping 855 bbls. of exceptionally clean 15.7-gravity oil per day from 1,936 feet after the hole had been plugged back from 1,971 feet and finished with 62 feet of 4¾-inch liner including 37 feet of perforated. Production is coming from the Vedder zone, and it is the first well on the lease to test out the productivity of this horizon, as all other wells on the Freeman property have heretofore been completed in the Elve and Jewett zones immediately above. Honolulu Oil Corp. completed No. 13 in section 20-28-29 pumping 441 bbls. of exceptionally clean 17.3-gravity oil initially from 1,830 feet. It was finished with an 8⅝-inch water string landed at 1,776 feet and 93 feet of 7-inch liner, including 65 feet of perforated. Honolulu No. 20, section 20-28-28, completed a few weeks ago as a gas well, has been shut in. Periodic attempts to deplete the volume of gas and thus stimulate crude oil production have failed.

On the West Front of the Kern River field, General Production Corp. completed No. 53 Young in section 13-28-27 pumping 40 bbls. of 14.7-gravity oil initially from 1,989 feet. Production was somewhat disappointing as the hole was finished with 355 feet of 8⅝-inch liner carrying 300 feet of perforated. It is obvious the water shutoff is defective, indicated by the unusually small production secured and the high cut upon completion. In the Premier district of Kern County, Desert Glow Oil Co. No. 1, section 14-27-27, was completed pumping 22 bbls. of 13.5-gravity oil daily from 1,254 feet. In the Edison field of Kern County, North American Consolidated completed No. 4 Brown, section 14-30-29, brought in pumping 108 bbls. of 15.9-gravity oil daily from 1,652 feet.

North Belridge

Belridge Oil Co. completed an excellent producer in the North Belridge field of Kern County when No. 24 in section 35-27-20 was brought in flowing 2,200 bbls. of very clean 33.8-gravity oil and 5,000,000 feet of gas per day from the Wagonwheel zone at 8,690 feet. This producer, an outpost, extends the proved limits of the field and the production possibilities of acreage in section 26-27-20 is expected to be determined within 60 days as No. 61 is rotating at 4,000 feet. Belridge Oil Co.'s new producer, No. 24, was finished with 839 feet of 4¾-inch liner carrying 380 feet of 250-mesh screen and was cemented through perforations at 8,310 feet.

Kettleman Hills

The Kettleman North Dome Association apparently made an important discovery in the Kettleman North Dome field when its No. 4-18-J in section 18-21-17 cored a good-looking oil sand at 10,716 feet. It confirms the original discovery made a few years ago in No. 1 Lillis-Welsh, an outpost in the extreme western end of the structure. Kenda's new discovery consisted of a 3-foot core taken at 10,713-16 feet and geologists are of the opinion this zone can be classified as the Avenal sandstone of Eocene age and should correlate with sand cored in No. 1 Lillis-Welsh at 10,821 feet. If this is correct, Kenda No. 4-18-J is running about 100 feet higher structurally.

Midway-Sunset

In the Midway-Sunset field of Kern County three commercial producers were completed. Standard Oil Co., which has started an aggressive but conservative drilling program in this district, completed No. 47-33-D in section 33-32-24 pumping 517 bbls. of 22.3-gravity oil and 57 bbls. of water per day. It was finished with 228 feet of 6⅝-inch liner including 182 feet of 60 mesh which was landed on bottom at 3,060 feet. Standard is

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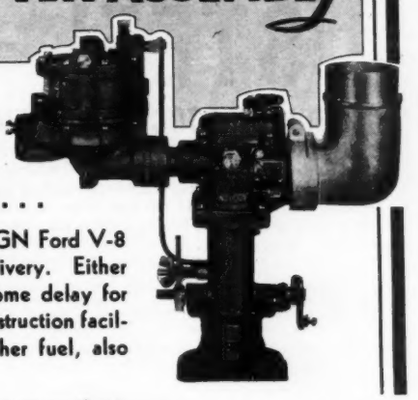

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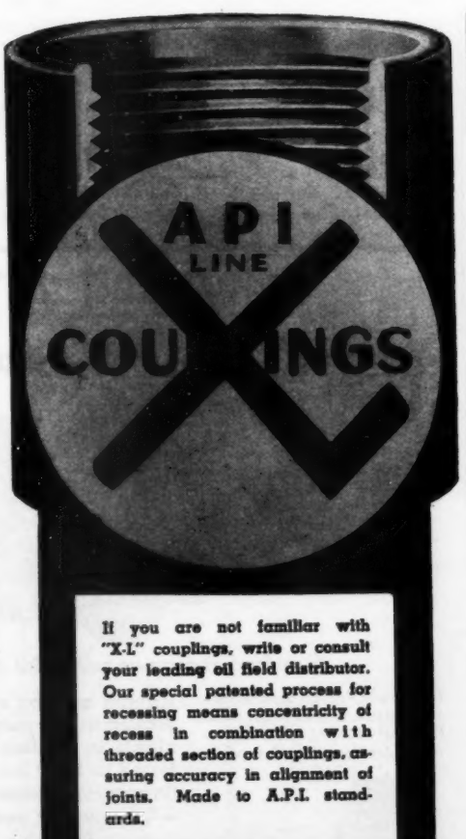

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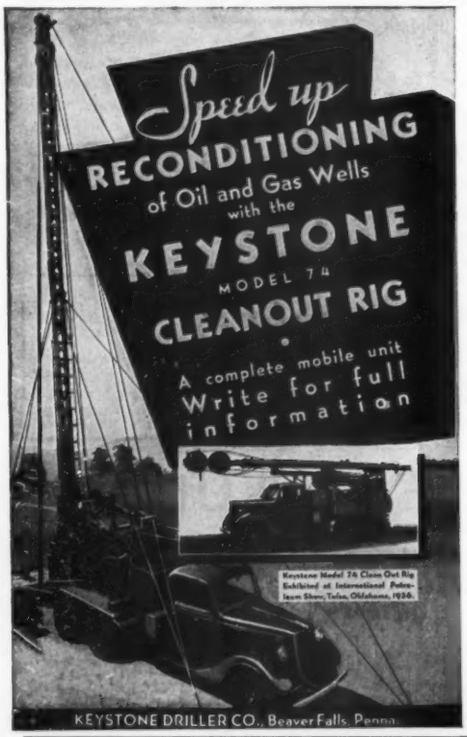

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starting four wells in this area and should have No. 51-33-D ready for a test within a few days. Shell Oil Co. completed a potential production test on No. 3 McKeon, finished at 2,067 feet, and it proved good for 305 bbls. of 18.3-gravity oil per day. Quality Oil Co. No. 5 Cypress, completed at 2,110 feet, has been finished pumping 248 bbls. of 15.8-gravity oil per day and the company is putting the finishing touches on No. 2 Western Pacific in section 27-32-23, as drilling operations have been concluded at 2,186 feet and pumping equipment is being rigged up.

Elk Hills

Richfield Oil Corp. got an excellent producer in the Elk Hills field of Kern County when No. 7-H Crampton, section 1-31-24, was brought in pumping 205 bbls. of exceptionally clean 22.1 gravity oil per day. It was bottomed at 3,065 feet and finished with an 8⅝-inch water string landed at 2,959 feet and 126 feet of 7-inch liner carrying 106 feet of 120-mesh screen. This is the first well to be drilled within the proved limits of the Elk Hills field in several years and the fact that clean production was secured indicates that Richfield Oil Corp. will undertake additional development. Plans are being made to undertake considerable remedial work in proved fields as well as exploratory work in wildcat areas.

Fruitvale

In the Fruitvale field of Kern County, Western Gulf Oil Co., discoverer of the field, completed No. 4 Sawyer-Reid pumping 820 bbls. of relatively clean 16.7-gravity oil per day from 3,474 feet. This well, in section 27-29-27, was finished with 110 feet of 6⅝-inch liner including 83 feet of perforated. Meridian Oil Co. completed another well on its fee property in section 23-29-27 when No. 3 was brought in pumping 51 bbls. of 17.4-gravity oil per day from 3,134 feet after having been plugged back from 3,141 feet.

Coastal Area

In the Shiells Canyon field of Ventura County the Texas Co. completed No. 132 Shiells flowing 383 bbls. of 28.4-gravity oil and 500,000 feet of gas per day from 4,127 feet, and are preparing to spud No. 133 Shiells in section 4-3-19. On the Temescal anticline in the Piru section of Ventura County, Pacific Western Oil Co. completed No. 8 Temescal pumping 120 bbls. of 24.1-gravity oil per day from 2,907 feet. The crew from this well was moved over to No. 9 Temescal, and drilling got under way in less than a week as the rig had been previously erected. In the Santa Maria Valley field of Santa Barbara County, Union Oil Co. is preparing to put No. 1 Russell on the beam following its refusal to flow after several days of continuous swabbing. It is believed No. 1 Russell should prove good for about 750 bbls. per day when put on the beam. In the Orcutt field Union Oil Co. completed No. 18 Squires, brought in pumping 136 bbls. of 21.7-gravity oil per day from 4,104 feet.

Los Angeles Basin

In the Huntington Beach field Union Oil Co. got a pleasant surprise when No. 9 Copeland was brought in flowing 2,000,000 feet of rich gas per day from 4,138 feet. The gas is worth more than the normal production of crude oil as the depleted condition of the zone precludes the development of large production. Texas Co. No. 9 Brown in this field was completed pumping 265 bbls. of 20.1-gravity oil per day from 3,832 feet after the hole had been finished with 108 feet of 5-inch liner including 80 feet of perforations. Metro Oil Co. recompleted No. 2 Ward-Baldwin after cleaning out the hole to bottom, 3,960 feet, and the well was returned to production pumping 101 bbls. of 23.9-gravity oil per day. In the Richfield district of Orange County Union Oil Co. finished No. 9 Coyle pumping 105 bbls. of 19.6-gravity oil per day from 3,402 feet.

East Texas Fields

(Continued from Page 112)

per hour. T. D. Jones and others No. 1 S. B. Pierce, 4,487-4,520 feet, 380 bbls. through one-quarter inch choke.

Henderson County

Sun Oil Co. No. 1 Watkins, 4,118-20 feet, 102 bbls. in 24 hours through one-eighth inch choke.

Titus County

Adams & Lyle No. 7 Davis, 4,237-4,330 feet, 15 bbls. per hour on pump. Byars and others No. 2-B Edwards, 4,225-4,300 feet, 195 bbls. on pump; No. 1-D Edwards, 4,265-4,303 feet, 216 bbls. on pump; No. 2-D Edwards, 4,290-4,305 feet, 201 bbls. on pump. Byrd-Frost, Inc., No. 1 Batson, 4,268-75 feet, 425 bbls. on pump. Byrd-Frost, Inc., No. 6 Hargrave, 4,153-4,241 feet, 330 bbls. on pump. Humble Oil & Refining Co. No. 40 King, 4,117-4,314 feet, 316 bbls. on pump; No. 3 Kirkpatrick, 4,253-4,328 feet, 50 bbls. on pump. Lucey Petroleum Co. No. 3 Williams, 4,214-84 feet, 330 bbls. on pump. O'Neil and others No. 1 Helton, junked and abandoned 2,035 feet. Dr. J. S. Rushing No. 7 Mitchner, 4,258-4,300 feet, 451 bbls. on pump. Tysco Oil Co. No. 4 Edwards, 4,251-77 feet, 8 bbls. per hour on pump.

Dr. J. A. L. Henderson, London, England, petroleum engineer and director of New Brunswick Oil & Gas Fields, Ltd., sailed for Canada, planning to spend six months in that country and the United States.

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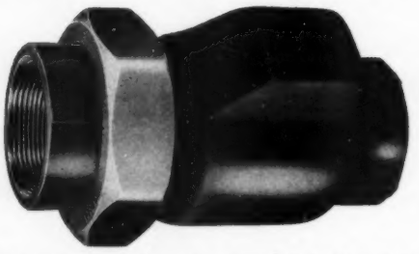

Detail showing easy accessibility to working parts of valve.

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West and North Texas

By L. E. BREDBERG

GAINES COUNTY IS GIVEN ITS THIRD POOL WITHIN A YEAR

FORT WORTH, Tex., June 21.—The West Texas Permian Basin, busiest district in the state from a development standpoint, rated one more wildcat discovery in the past week, which is of much consequence, especially to Gaines County, one of the northern tier counties in the district. At the same time, another recently discovered field, in the Delaware Basin was being extended 1½ miles to the west by an outpost producer, which may signify the development of a high-gravity oil producing pool of considerable extent.

Gaines Discovery

The significant wildcat discovery of the week was made by Amon G. Carter and the Continental Oil Co. Mr. Carter had obtained a farm-out of a block of acreage in the northwestern part of Gaines County for two tests, and the Continental Oil Co. started two tests, cooperating with Mr. Carter, on adjacent sections.

The discovery well is located in the NW section 48, Block AX, near the Yoakum County line. Another test is in the NW cor. section 47; one in the SW cor. section 46, and one near the C section 44, all in the same block and within 3½ miles of each other. The Amerada Petroleum Corp. is starting one in section 48, only 1½ miles southwest of the discovery. The five wells will give a definite picture of the extent of the new field on a southwest-northeast trend, within the next couple of months.

This new discovery opens the third field in Gaines County within a year's time. There are two oil wells in the Seminole field, about 3 miles northwest of Seminole, and a lone producer about 9 miles to the south in an area opened by the Landreth Oil Corp., but which, so far, has proven itself to be but a small pool.

Total depth of the Carter-Continental Oil Co. No. 1 A. L. Wasson and others is 4,959 feet, in lime. It showed oil and gas from various depths below 4,648 feet, logging broken showings of oil and gas from 4,836 to 4,902 feet and at 4,933-50 feet. Five and one-half inch casing was cemented at 4,779 feet, and 2½-inch tubing run preparatory to testing. It started showing mostly wash water with a little oil. The wash water then diminished until the latest reports stated that it was making over 6 bbls. of fluid per hour, 40 per cent of which was wash water, there being no bottom-hole water. The oil is still clearing and when the water is completely eliminated, the well will no doubt make around 20 bbls. per hour without shooting or acidizing. It is also making around 2,000,000 feet of gas per day, with the oil and water, not a high gas pressure, but sufficient to lend encouragement to the belief that a field of considerable importance is located in the area. The discovery will be followed by active work across the line on wildcat tests in the southwestern corner of Yoakum County, where three are scheduled for the near future. Acreage on the trend to the southeast, to the Seminole pool, about 14 miles distant, is the most valuable at the present time. Leases will soon expire in this area, which fact will hurry exploratory work.

The Continental Oil Co. block covers 13 sections of land. The section just south of the discovery well, is held by Amerada Petroleum Corp., with three-quarters, the Shell Petroleum Corp. holding the northeast quarter. Both of the northern quarters will no doubt be tested in the near future, with possibly the Humble Oil & Refining Co. drilling in section 381, to the southwest. The Phillips Petroleum Co. holds a west offset 80 acres to the discovery, in section 53, which will also force a test as soon as this new well is completed.

Pipe Line Possibility

The new undeveloped pools in southeastern Cochran, southwestern Hockley, southeastern Yoakum and the three pools in Gaines will have a better chance of gaining a pipe line outlet due to this new strike. If even four of the five tests are producers, they will prove a pool at least 4 miles in length from southwest to northeast, and of sufficient import to make a pipe line connection feasible. The Humble Pipe Line Co. has the nearest line. It connects with the Means field in the northeastern part of Andrews County. This is many miles from the small fields in Gaines, Yoakum, Cochran and Hockley, but the line connecting the Means field was recently increased in capacity, making a connection to the new fields seem more plausible.

A map of the new discovery area in Gaines was published in the June 17 issue of The Oil and Gas Journal, showing the new discovery and other tests drilling on adjacent sections.

Loving Extension

The next important feature in the West Texas district was the showing for a producer and 1½-mile western extension to the Mason pool, northwestern Loving County, of Finley and others No. 1 Johnson, in section 24, Block 56, Township 1, T. & P. Survey. This well topped Delaware lime at 3,577 and 3,614 feet (driller's log) and shut down at 3,666 feet to shoot and test. It was given a 150-quart shot at 3,602-62 feet. and is now cleaning out, filling 400 feet with oil while cleaning out. It showed its first oil at 3,640-50 feet, with an increase at 3,650 feet. Elevation of the test is 2,972 feet.

This is the first important extension for this Delaware sand field which created a big lease and royalty play in the western part of Loving, extending west and southwest into Reeves County, and north into New Mexico where a number of tests are proposed.

The first test drilled south of the discovery. Stanolind Oil & Gas Company's No. 1 Kyle, south offset, located in section 20, Block 55, Township 1, was due for abandonment after the company drilled into water at 3,984 feet, plugged back to 3,946 feet and shot twice, but the decision was reversed and it is to be placed on the pump as it looked good for around 30 barrels of oil and 78 barrels of water after standing 24 hours. It will make a small well, and defines the pool on the south. With a dry hole a couple of miles to the east, the pool is defined in that direction. The Pasotex Pipe Line Co. is taking the high gravity sweet crude from the discovery well.

Penn Extension

The Penn pool in Ector County is being extended another half mile southwesterly by Rushwold Oil Co. (Jim Rush and Eddie Griswold), on the Connell lands, in the northeast corner of section 26, Block B-16. The test struck oil and gas at 3,450-76 feet, with an increase at 3,489-3-532 feet, and is drilling ahead below 3,550 feet, with the hole full of oil. This is one of the most important extensions made to the pool in some time.

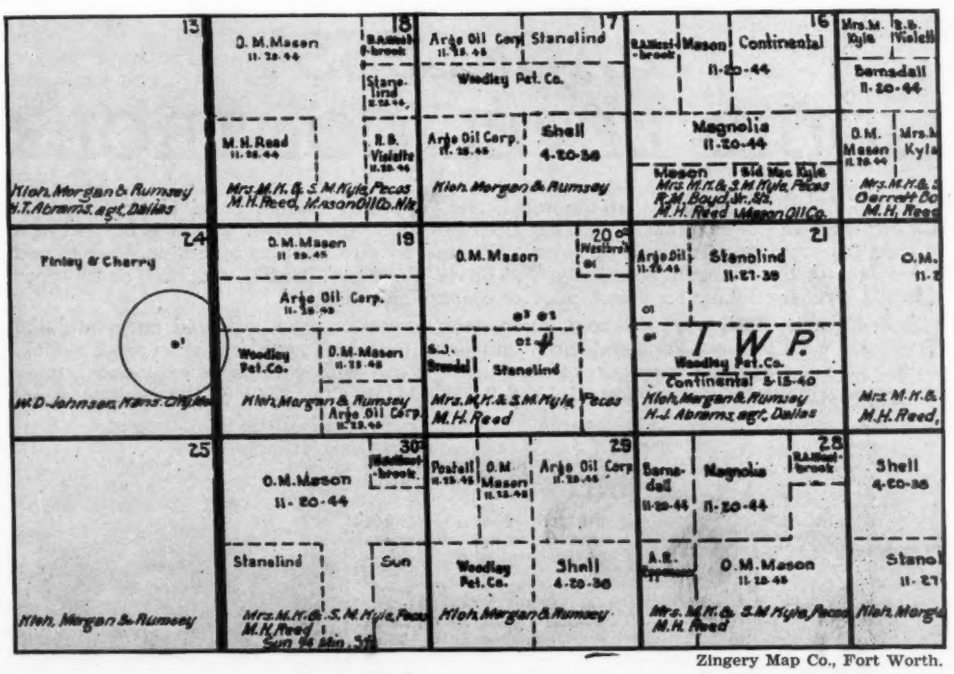
Two Tests for New Rotan Field

Two new tests for the recently discovered Rotan field, opened about a month ago by the Southern Oil Corp. on the Joe Robinson lands, in section 172, Block 2, H. & T. C. Survey, 2½ miles northeast of Rotan, in Fisher County, will be drilled by the Magnolia Petroleum Co. and the Tide Water Associated Oil Co. The latter test will be drilled 1,225 feet east of the discovery, in Section 172, and the former company will drill a test 1,315 feet from the east lines and 1,423 feet from the north lines of the same section.

The discovery well is producing from a Dolomite pay topped at 3,502 feet, total depth 3,505 feet, with the well shut in for lack of pipe line connection. It is opened intermittently and allowed to flow, some of the oil going to a local refinery by truck.

New Cochran Wildcat

P. N. Wiggins of Dallas, and others, have staked location for their second wildcat in Cochran County. They are now drilling one about 4½ miles to the north-



Zingery Map Co., Fort Worth.

Mason Pool in northwest Loving County and outpost test which is showing for a producer and a 1½-mile west extension

west of the Duggan pool in the southeastern corner of the county, and this second test will be about 4 miles due north of the lone producer in the new pool opened several months ago by Cascade Oil Corp. and others on the Duggan lands. The new location is on the Carrie Slaughter Dean lands, in the northeast corner of League 58, Martin County School Lands Survey. Their other test is in Labour 26, League 92, Lipscomb County School Lands Survey.

Leasing in Bailey County

Since production has been found in the far northern counties of Hockley, Cochran and Yoakum counties, leasing has been extending still farther to the north and northeast. A recent purchase in Bailey County was made by the Magnolia Petroleum Company on some 4,420 acres in League 204, Ochiltree County School Lands, approximately 5 miles southeast of Muleshoe, in the northern part of the county. A ten year lease will probably preclude near future testing.

Probable Abandonment

E. L. Wilson and others No. 1 Texas Land & Mortgage Co., has been showing for a dry hole after encountering sulfur water and filling 1,000 feet with water while drilling below 5,000 feet. It was scheduled to go to 5,150 feet, unless production or sulfur water was encountered above that depth. It is located in section 45, Block M, E. L. R.R. Survey, about 1½ miles southeast of the small pumping discovery of Ray Albaugh and others in the northwestern part of Dawson County. Elevation is 3,089 feet.

Pecos Wildcat

E. P. Cravens has staked location for a wildcat test in the extreme northern corner of Pecos County, a couples of miles south of the Pecos River and Ward County line. It is on the Trees lands in section 63, Block 8, H.&G.N. Survey.

Loving Purchase

About midway between the recently discovered Mason pool and the old Wheat field in Loving County, Continental Oil Co. has taken over a block of some 12,000 acres from E. C. Marrs of Fort Worth, and may drill a Delaware sand test in the near future, possibly in section 20, Block 54, Township 2, T.&P. Survey, about 7½ miles southeast of the Mason Oil Co. No. 2 Kyle, discovery well of the Mason field.

Jones County Purchase

The Irion Mountain Oil Co. of Fort Worth has sold a half interest in its Jones County block to the Humble Oil & Refining Co. for around $20,000 in cash. The block centers at the Irion Mountain and others test on the Carl Clander lands in the SW section 196, B.B.B.&C. Survey, which is now drilling below 1,900 feet.

Hawley Development

The town of Hawley is to see some rapid development within the next several weeks following the western extension of the Guitar field into the townsite by the Brown Eagle Oil Co. and S. B. Robert No. 1 W. S. Lewis, which is bottomed at 1,996 feet, estimated good for between 1,000 and 1,500 bbls. It will perhaps be deepened below 2,000 feet, but is not to be acidized because of its high potential rating as it now stands. Town lot leasing has been active since the first showing was made by this well and many permits have been and are being obtained to drill wells on lots within the townsite, which is located about 12 miles northeast of Abilene, and in Jones County.

Central and North Texas

The wildcat drilled by the Barnett Petroleum Corp. and others on the L. C. Downtain lands, 1½ miles southeast of Eastland, in section 2, E.T.R.R. Survey, Eastland County, topped a pay sand at 1,430 feet and shut down in sand at 1,463 feet to set casing, after showing for a producer. The oil tested 40.4 degrees gravity.

Another wildcat for that area is to be drilled by the Monark Oil & Gas Co. on the same lands, but 4 miles northeast of Eastland, and in section 14, Block 4, H.&T.C. Survey, where one old hole was abandoned when it had to be junked. Two other producers were completed years ago during the boom.

Hickok Oil & Development Co., which has been one of the most active wildcatting and drilling companies in the Cisco area in Eastland County, is now preparing to drill a 4,000-foot test on the Grover S. Cleveland lands, in section 477, S.P.R.R. Survey, 8 miles northwest of the town of Cisco. In 1935 a gas well was opened on these same lands, development not having extended the area since that time.

Two miles northeast of Bird's Store in Brown County, R. M. Ragsdale of Brownwood, is preparing to drill a wildcat on the John Tabor lands, in section 87, H.&T.B. Survey. It is scheduled to go to 2,500 feet.

Dickens County Wildcat

C. P. Morris & Son, drilling contractors, have spudded in a test on the Harris lands, about 5 miles north and 2 miles west of the town of Spur, in the southwestern part of Dickens County. It is to be drilled by Litchfield and Combs, and contract calls for a 5,000-foot hole.

Bolivar Field

The Bolivar area, located 2 miles west of Bolivar in Denton County, which now has two oil wells and one gas well since the discovery of the No. 2 Knox 18,500,000-foot gasser from sand logged at 1,470 feet last week, appears as an interesting pool in the making. The gas well is an offset to a depleted gasser drilled in the R. Howard Survey, about three months ago, and for awhile appeared as an oil producer which might later be connected with the Lander production on the Forrester lands in the Baroux Survey, about 2 miles farther to the northwest. A north offset to the Lander oil discovery, Gainesville Refining Co. No. 1 Gibson Brothers, S. Yoachum Survey, topped the sand at 1,644 feet and produced 4 bbls. of 40-gravity oil, with some gas. It is to be drilled deeper. About one-half mile northwest, Lander's No. 1 Gibson Brothers, in the O. Wilcox Survey, is showing for a gas well after drilling plug at 1,600 feet. It was estimated good for 5,000,000 feet.

Collinsville Pool

The Collinsville pool in southwestern Grayson County, located about 2½ miles southeast of Collinsville, where the Rapp Drilling Co., Anderson and others have a small pumping well on the J. R. Singletary lands, in the Charles Quillen Survey, is to receive another test immediately. Jim Anderson, one

(Continued on Page 138)

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RIGHT: "Packless" float box actuating pilot valve of Davis diaphragm motor valve.

REPRESENTATIVES:
Westcott & Greis, Inc., Mid-Continent Representatives, Tulsa, Dallas, Houston.
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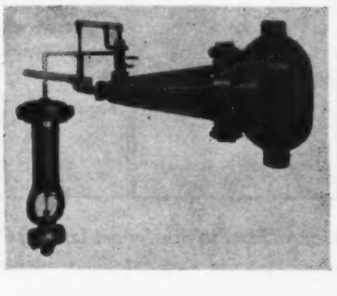


TWENTY-INCH LINE

(Continued from Page 57)

of heavy paint was removed by means of scrapers. Any light rust spots that had developed during transportation were cleaned by wire brushing. Any grease or oil that was found on sections of the pipe was removed by rags soaked in gasoline. Great care was exercised that the gas-soaked rags were discarded when they tended to become saturated with oil or grease. All dust and dirt was carefully wiped off. The whole job of cleaning both at the pipe mill and at the storage yard was very carefully supervised and inspected, as proper cleaning of pipe surfaces before the application of protective coatings is absolutely essential.

All pipe was then given a hand-brushed application of Bitumastic 70-B priming solution. This was well brushed out so as to avoid runs, festoons or accumulations of heavy primer. The work was very carefully done and particular care devoted to securing complete coverage of a well-brushed out priming coat.

The pipe was primed within 4 inches of each end on the outside only. The primer dries by evaporation — and therefore quickly — but the general practice was to not coat any primed pipe with hot enamel until the following day.

The coating machine is designed for end-feed production in a straight line. By this is meant that the primed pipe passes through the machine in an endless stream. Each primed pipe is attached to a pipe already passing through the machine. There is an endless sequence of primed pipe being added at one end for passage through the machine and coated pipe being removed at the other end after passing through the machine.

A very novel feature of the machine is the positive drive for passing the pipe through the coating operation of applying hot Bitumastic 70-B enamel. This drive, which is patented, always insures positive movement of the pipe through the machine at all times. There is no possibility of slippage which would effect the adequacy of the coating application and interfere with proper wrapping when the machine is used to coat and also at the same time wrap pipe.

As the primed pipe passes through the driving mechanism it passes over a tank containing hot Bitumastic 70-B enamel. This is entirely an application tank which is fitted with suitable burners merely for the purpose of maintaining the proper temperature of the hot enamel but is never used for melting enamel. The enamel is broken up and fired in separate melting kettles which are operated under the supervision of a trained expert of the coating manufacturer. As hot enamel is required for replenishment of the material in the application tank, it is withdrawn from the melting kettles.

The pipe passes over the coating tank and under a wide coating nozzle. The hot enamel is pumped from the tank into the coating nozzle and issues from the bottom of the nozzle in a wide ribbon, onto the revolving pipe. A fabric spreader is placed so as to help distribute the coating on the outside of the pipe surface.

The coating was applied in a smooth even thickness to a thickness of not less than one-sixteenth inch. This was frequently checked. Because the pipe is revolving as the coating is cooling there is no possibility of runs, festoons or sections of heavy coating occurring on the pipe surface. The coating is exceptionally even in thickness and smoothness.

Beyond the point of application the coated pipe passes through a water spray to accelerate the cooling of the coating. This permits prompt handling of the coated pipe on the delivery skids. This water spray is not at all harmful to Bitumastic 70-B enamel but on the contrary is very beneficial.

As the pipe joints pass through the coating machine the enamel is left off at each end of each pipe for a distance of 10 inches to provide bare metal for the field joints. The coating is cut off sharply and with a straight edge at right angles to the center line of the pipe.

Showing coated bend with Bitumastic 70-B enamel—being tested with holiday detector and also showing portion of coating applied in yard and unbonded wrapper being applied in the field

After the coated pipe passes through the water spray the joint between the coated pipe and the pipe which is just passing through the machine is broken. The coated pipe is then rolled down onto the padded delivery skids and is ready for transmission to the field.

Coupling Device

A very novel coupling device was invented for quick jointing of the large diameter and heavy pipe joints that were coated by the machine for this job. This coupling works on the inside of the pipe and securely holds two joints together for passage through the machine. This unique system requires only one coupling instead of a multitude of separate couplings. It greatly simplifies the operation of the machine and increases production materially.

After the pipe were placed on the discharge skids a holiday detector operating under about 5,000 volts was carefully run back and forth over the coating. Very few holidays were ever discovered because of the perfect application of the material and the absence of pinholing properties in the coating itself.

It is perfectly obvious that this set-up in a temporary storage yard was practically a "shop." It is further obvious that application by a machine of this type operating in a fixed location in a "shop" should result in perfect application. This is especially true on the job as all of the work was done by the manufacturer of the coating, who naturally is more familiar with its composition and characteristics and application conditions than anyone else. Obviously the workmanship was far superior to the kind of application that can be expected in the field by men crawling across country and subject to all of the vicissitudes and hazards of weather and field conditions. This is true no matter how careful and how honest and sincere the men are who are attempting to apply the coating in the field.

The coating work in the field is always located somewhere between the head and tail of the pipe laying operations. Any delay in the coating work holds up the operations which follow as welding, jointing, coating of joints, lowering and backfilling. There are many times in field work when weather conditions permit all of these operations but are such that the pipe surfaces are not in suitable condition to receive the hot coating. For instance, the pipe may be wet in the early morning from dew. This condition would in no way interfere with any of the operations following the pipe coating. The pipe, under such circumstances, however, should never be coated until pipe surface is dry and clean. This naturally would mean a delay in the pipe coating work until the surfaces can be made dry and clean. This might mean several hours. Such a delay oftentimes will hold up all of the subsequent laying operations. This loss of several hours is a serious matter to the pipe laying contractor and to the owner as it would naturally delay the ultimate completion of the pipeline.

All of this hazard is eliminated by working in the storage yard. If, for instance, the pipe in the coating yard is wet in the early morning, operations can be suspended until the pipe is wiped off and allowed to dry because the machine coats the pipe faster than it can be layed. Therefore, it is always possible, even though coating operations may be suspended for several hours on account of wet pipe, to then start work and have no difficulty in catching up with the daily footage requirements. Furthermore, it is easy to build up a stock or reserve of coated pipe which can be drawn upon by the stringing contractor when weather conditions permit laying but do not permit coating. This further prevents any delay of the laying work.

Men working in a shop doing the same thing day after day become more efficient and can do a much better job than would be possible in the field where the coating of each joint of pipe means a constant shifting of the "site" of the work. New conditions oftentimes surround the coating in the field of almost every joint of pipe. There cannot be the same careful attention to details of cleaning and application and also of supervision and inspection that is possible in a coating yard.

Oftentimes heavy rains will turn an otherwise suitable workable spot in the field into a temporary mud-hole or swamp. This makes for a very difficult coating job in handling the pipe and also in making sure that the pipe is thoroughly free of accumulated mud and is entirely dry. "Cavey" ditch often occurs which means rapid working to get the pipe in the ground at all. Coating operations under such conditions are likely to be at the least very uncertain in respect to quality.

There was some concern that it might not be practical to transport the unwrapped coated pipe from the coating yard to the field without materially damaging the coating from abuse in transportation and handling. The coating contractors had no concern on this score because of previous years of experience in handling coated pipe for water service. This steel water pipe, because of its greater size and heavier weight and other factors involves considerably more possibility of damage to the coating than exists on any oil or gas line.

As an illustration, miles and miles of coated steel water pipe up to 78 inches in diameter and in lengths from 30 to 48 feet and weights up to 12,000 to 14,000 pounds per joint have been handled, without appreciable coating damage. Such pipe is usually coated at the steel fabricating plant and not in a coating yard convenient to the right of way. A lot of this pipe has traveled over 1,000 miles by rail before it ever reached the point of destination where it was then unloaded, placed on stringing trucks and taken out to the right-of-way. Furthermore, such pipe is not only coated on the outside with Bitumastic 70-B enamel to protect it against soil corrosion but it is also lined by the spinning process with a heavier application of the same material. Most of this pipe is not furnished with any wrapper. There is therefore no wrapper to enable the coating to resist abuse. The constant "jiggling" of large diameter pipe while traveling by rail, which sets up varying and repeated stresses in the coating, is a further hazard that is not present at all in the case of oil or gas lines. This condition has been intensified in many instances of coated and lined pipe moving by rail at atmos-

pheric temperatures around 0° F. The coating on the inside of a pipe is much more susceptible to damage from these causes than is the case of the coating on the outside of the pipe. As gas lines are never coated on the inside, this additional factor of possible damage in transporting pipe is not present as it is in the case of water pipe.

In spite of the greater difficulty of shipping, handling and transporting large diameter steel water pipe coated not only on the outside but also on the inside, experience with hundreds of miles of handling such pipe has definitely proven that reasonable care in loading and handling is all that is necessary to insure delivery of such pipe to the field without any serious damage to the coating. With this experience behind them the coating manufacturers had not the slightest hesitancy in advocating a coating yard application of unwrapped Bitumastic 70-B enamel for this particular project. Actual experience on this particular job demonstrated that the pipe was transported and handled and delivered in the field with a surprisingly small amount of damage to the coating.

Truck Equipment

The trucks for stringing were equipped with cut-out saddles so that pipes were kept separated. These saddles were carefully padded with a combination of garden hose, inner tubes and rubber belting. This protection was securely fastened in place so that it did not need renewing after each trip. The coated pipe was placed on the saddles four to a truckload. After loading, the four pipes were tied down to the body of the truck by a chain protected with a fire hose and burlap.

When the truckload of coated pipe arrived in the field the coated pipe was lifted off the truck one at a time, by means of a caterpillar tractor equipped with a boom, and placed on skids so that the pipe rested on the uncoated ends.

In the field Truman & Smith, who were the laying contractors, welded adjoining pipe on welding dollies. The weld was then thoroughly cleaned by the field coating crew by hand brushing with wire brushes and scrapers. After the weld was cold it was painted with one coat of Bitumastic 70-B priming solution. When this had dried the weld was coated with Bitumastic 70-B enamel applied by the sling method.

Later the pipe was placed on rolling rigs and wrapped by a saddle type wrapping machine which applied the asbestos felt spirally for each length of pipe up to the weld. This wrapper was unbonded but was daubed with Bitumastic 70-B enamel every few feet as it was applied.

Then the pipe at the welds and at the ends was wrapped with felt, using separate pieces, each long enough to completely encircle the pipe allowing a longitudinal lap of about 3 inches. The lap was sealed with an adequate hand brushed application of Bitumastic 70-B enamel.

The wrapping of the welds was done so that about 4 inches at the weld itself was not wrapped in order to permit a soap suds test of the weld later on when the pipe was lowered into the ditch and partially backfilled.

When the line was assembled above the ditch the mechanical couplings were installed in position. A copper bond was welded from each pipe to the center ring. The couplings were then coated with Bitumastic coupling compound by means of a coupling pan. After the pan was removed the uncoated ends of the pipe adjacent to the coupling were coated with the same material by means of a canvas sling. Then a single sheet of felt long enough to encircle the pipe with a lap of 3 or 4 inches was placed around the pipe over the coating adjacent to each end of the line coupling and held in position by a suitable daubing of coupling coating. The coated and wrapped pipe line was then lowered into the ditch and backfilled, except at the welds and couplings. These were left open for testing with soap suds while pressure was in the line.

Eastern Fields

(Continued from Page 91)

In Pleasants County, F. R. Ferguson and others drilled a second test on the Oliver Gorrell farm in Lafayette district through the Squaw sand to 1,868 feet and it was dry. In McKim district, F. M. Clymer and Co. drilled a test on the Allen Howell farm to 800 feet, the Cow Run sand, and it was also dry.

In Putnam County, Smith & Young completed a test on the Thomas Gibson heirs farm in Teays Valley district to 1,020 feet, the Salt sand. It is a gas well gauging 600,000 feet a day. In Scott district, Smith Oil & Gas Co. drilled a test on the Simms heirs farm to 1,053 feet through the Salt sand and it was dry.

In Roane County, the Egypt Oil & Gas Co. completed a test on the Thomas J. Morford farm in Spencer district at 2,020 feet. The Maxton sand was at 1,784-1,823 feet with gas at 1,787-1,793 feet; Big Injun sand 1,960-2,006 feet. The gauge was 60,000 feet a day.

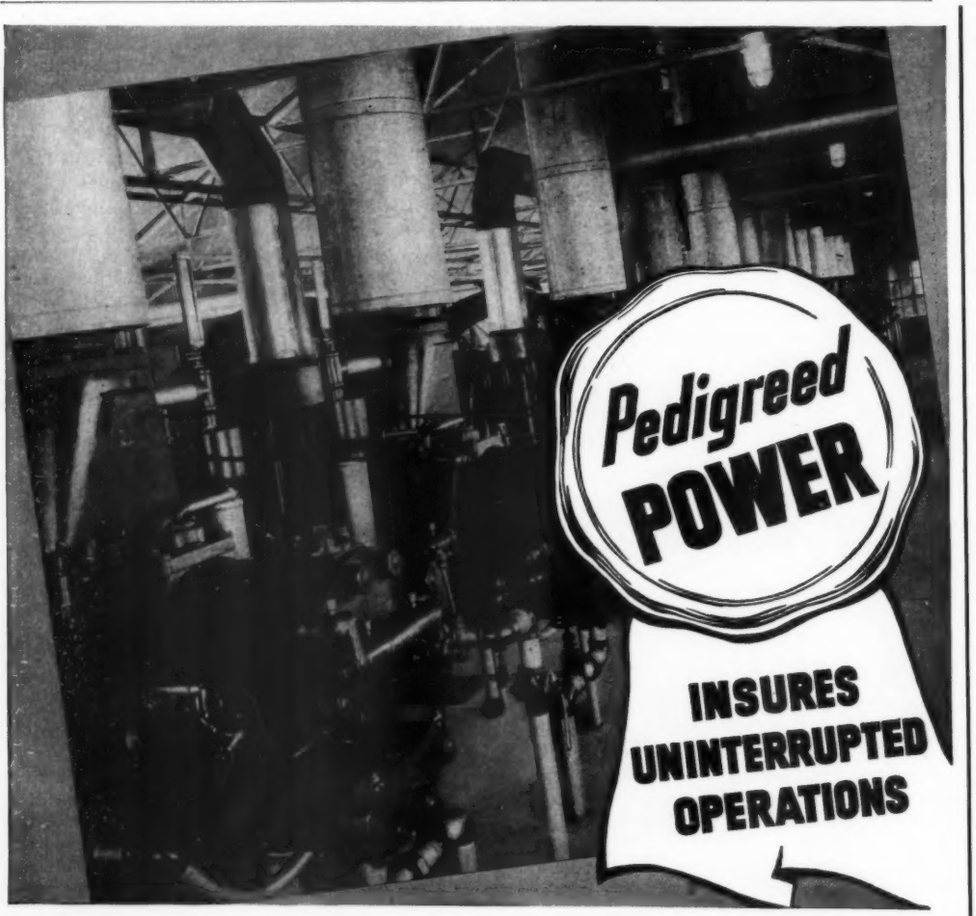
In Wayne County, the West Virginia Gas Corp. completed the test on the Emaline Bowen farm in Union district at 3,323 feet. The Big lime was at 1,450-1,625 feet, Big Injun 1,660-1,720 feet, Berea 2,275-83 feet, Brown shale 2,970-3,311 feet with 106,000 feet of gas at 3,200 feet.

Outside Deep Tests

The Carnegie Natural Gas Co. shut down at 4,677½ feet in the deep test on the W. C. Patterson farm in Burning Springs district on the Burning Springs Anticline in Wirt County and will run casing. The top of the lime was at 4,660 feet or lower than expected.

In the same district no progress was made in the deep test on the Walter Hoffman farm which is shut down at 5,370 feet. Godfrey L. Cabot, Inc., made no change in the status of the Allen Hardman test in Center district, Calhoun County.

In Jackson County, the tests of the United Carbon Co. on the Elizabeth Ward Perkins farm in Washington district are drilling at 1,345 feet and 1,290 feet.



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Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, June 19.—Crude production from all Alberta fields in April amounted to 172,608 bbls. compared with 161,832 bbls. in March. In Turner Valley, limestone production increased from 168,407 to 169,218 bbls., and shallow crude production from 809 to 932 bbls. Red Coulee light crude production declined from 1,341 to 1,195 bbls. while Wainwright heavy crude gained from 675 to 1,263 bbls.

In April, Royalite Oil Co. was the major producer in Turner Valley, with 46,915 bbls. The Royalite Sterling Pacific wells produced 32,338 bbls., of which over 30,000 bbls. came from No. 4 Sterling Pacific. B. & B. Co. No. 1 produced 19,614 bbls. Turner Valley Royalties No. 1 gave 17,604 bbls., and the Mercury-Miracle properties 10,553 bbls.

Acidizing Operations

Following the recent successful acidizing of Royalite No. 3 Sterling Pacific, there is a great deal of activity in the acid treatment of small limestone producers in South Turner Valley. Westside Royalties No. 1, LSD 3, section 21-18-2w5, bottoming in the Madison limestone at 6,379 feet, gave a crude production around 225 bbls. a day under 150 pounds back pressure, with a flow of 2,700,000 feet of gas. It was treated with 5,000 gallons of acid and almost immediately the flow increased to around 500 bbls. a day, later settling to around 432 bbls. under 200 pounds back pressure with gas flow of 7,000,000 feet. The highest production before acidization was 273 bbls. a day. Foundation Petroleums No. 1, LSD 5, same section, bottoming at 6,456 feet, with 225 to 230 bbls. a day average production, is also being treated with acid. Turner Valley Royalties No. 1, LSD 13, section 28-18-2w5, the first west flank crude producer, brought in about a year ago with a flush production of 900 bbls., and now making around 585 bbls. a day will also be treated, after removing wax which has been clogging the tubing and impeding production. Miracle Oils No. 2, section 5-19-2w5, will also be extended to other wells of Mercury Oils, Ltd.

Highwood-Sarcee Production

In the old south field, Highwood, Sarcee Oils No. 1, LSD 16, section 21-18-2w5, which had a naphtha recovery around 35 bbls. a day from the Madison, has perforated casing at the Dalhousie sand horizon giving a crude production of 121 bbls. a day, testing 61 gravity. Wet gas has increased from 6,800,000 to 9,500,000 feet a day. Experiments are being made with back pressure adjustments to determine the best conditions for taking recovery from both the Madison and the Dalhousie. Spooner Oils No. 5 Anaconda, LSD 1, section 28-18-2w5, has perforated casing at the Dalhousie horizon, and is testing production. It is expected that several other wells in the same area will be given similar treatment. Highwood-Sarcee Oils No. 2, LSD 1, section 21-18-2w5, perforated casing to increase production from 40 to around 80 bbls. a day.

West Side Drilling

In the West-Central Turner Valley, Brown Oil Corp. No. 3, LSD 15, section 19-19-2w5, has spudded.

In section 5-19-2w5, Mercury Royalties No. 1, LSD 8, is below 3,573 feet. Mercury Oils No. 8, LSD 3, section 4-19-2w5, is below 3,447 feet.

In section 28-18-2w5, Richland Royalties No. 1, LSD 12, is below 3,050 feet, carrying 13-inch pipe. Richland No. 2, LSD 5, is below 4,275 feet, carrying 10-inch. Richland No. 3, LSD 14, bottoming at 5,440 feet, is bailing light crude encountered in the Dalhousie sand, preparatory to deepening about 200 feet to the Madison lime. The crude rose 4,500 feet in the casing, with a potential production estimated 30 to 40 bbls. a day. After finishing in the lime it is planned to perforate casing and take crude production also from the Dalhousie.

Sunburst Oil Co. No. 1, LSD 1, is below 2,325 feet.

In section 21-18-2w5, Davies-Royalite No. 2, LSD 13, is reaming below 2,655 feet with bottom at 4,150 feet.

In section 20-18-2w5, Monarch Royalties No. 1, LSD 9, is in the upper Dalhousie sand below 6,190 feet, and is deepening to the lime. Royal Canadian Oils No. 1, LSD 15, is below 380 feet. Sunset Oils No. 1, LSD 10, is below 2,230 feet. The company is arranging with Snyder & Head to move the outfit from Monarch Royalties No. 1 as soon as the latter is completed for a new test in section 20, probably in LSD 7. Brown Oil Corp. No. 2, LSD 8, is below 3,789 feet.

In section 17-18-2w5, Prairie Royalties No. 1, LSD 16, is below 3,968 feet. In section 16-18-2w5, Brown Oil Corp. No. 1. LSD 14, is below 3,893 feet. Firestone Petroleums No. 1, LSD 13, is below 2,513 feet. Richwell Oil Co. No. 1, LSD 5, is below 923 feet.

In section 9-18-2w5, National Petroleum Corp. No. 2, LSD 14, is below 2,060 feet.

Western Extension

In section 30-18-2w5, Royalty No. 6 Okalta, sponsored by Okalta Oils, Ltd., of Calgary, has been definitely located in LSD 3, following a decision of the Alberta Public Utilities Commission in regard to surface rights. The decision of the board awarded the landowners $250 for 5 acres as against a claim of $500 for 10 acres; while if and when the well is in production with derrick removed, charges will be based on a 2-acre holding at approximately $100 per year. The Okalta company is moving in derrick timbers and the test will spud inside the next month.

North Turner Valley

In North Turner Valley, Phillips Royalties No. 1, LSD 16, section 16-20-3w5, is cementing caving at 3,006 feet. Home Oil Co. No. 1, LSD 8, section 33-20-3w5, is rigging.

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Central West Fields

(Continued from Page 117)

tion for No. 6 on the Benson Nethers property. In Newark Township, Wehrle Gas Co. No. 1 William Wright was completed below the sand at 2,296-2,332 feet and gauged 120,000 feet of gas naturally. In section 16, Perry Township, George Vandergrift is rigged up for a test on the L. Wright property.

In Muskingum County, section 17, Brush Creek Township, Wilburg Swingle No. 3 Ernest Epply drilled through broken Clinton formation from 4,040-80 feet, where it made 40,000 feet of gas naturally and is drilling deeper. In section 21, Newton Township, Ohio Fuel Gas Co. has staked a location for the second test on the John Hansen property. In section 15, Salem Township, the Wittmer Co. has moved a rig on location for a test on William J. Dennison & Co. property.

The largest gas well to be completed in the Ohio field in some time was brought in by the Hopewell Oil & Gas Co. on the S. A. Bowman property, in section 32, Wayne Township, Muskingum County. This well was completed below the Clinton sand at 4,154-96 feet, where it gauged 4,595,000 feet of gas naturally. In section 4, Washington Township, Ohio Fuel Gas Co. has staked a location for a test on the Edmund Melvin property. In section 3, Licking Township, Hope Construction & Refining Co. has staked a location for No. 4, on the Amanda Butler property.

Ohio Fuel Gas Co. No. 2 John Stockert, in section 17, Jackson Township, Stark County, was completed as a commercial gas well in the Clinton sand at 4,251-68 feet.

In Medina County, section 14, Chatham Township, Harry Dempsey is rigged up for a test on the Nelson Lance property and in the new Huron County field, section 3, Hartland Township, Patterson & Co. are spudding in a test on the B. Doane property.

In Guernsey County, section 10, Wheeling Township, Beabout & Co. No. 2 Elmer Hamilton was drilled through Berea sand at 1,226-93 feet without a show of oil or gas and will drill to the Oriskany sand. In section 15, Jefferson Township, Ronschausen & Ridgeway No. 4 R. C. Gillespie & Co. topped a broken Berea formation at 1,170 feet and gauged 277,000 feet of gas naturally in the sand at 1,222-28 feet. In section 9, same township, Wilbur Keith is spudding in a test on the M. R. Cherry property. In section 19, Center Township, John Bindas No. 1 Laura Laughlin topped the Berea sand at 1,431 feet and is making 3 bailers of water an hour at 1,348 feet without a show of oil or gas and will probably be abandoned. In section 11, Liberty Township, George Kernoodle is rigged up for a test on the L. Milligan property. In section 15, Millwood Township, M. J. Purdy No. 3 Joel Carter was drilled through the Berea sand at 1,708-18 feet, where it gauged 59,000 feet of gas naturally. The well was shot with 50 quarts and gauged at the rate of 90,000 feet of gas a day and is being cleaned out.

In Noble County, section 7, Wayne Township, Chaseville Oil & Gas Co. No. 3 Uranus Corwin gauged 375,000 feet of gas naturally in the Injun sand at 983-1,015 feet and will be drilled to the Berea sand. In section 32 Marion Township, Berbacher, is moving a machine on location for the No. 3 on the F. M. Calland property. In section 25, same township, George Robinson & Co. No. 3 W. S. Atkinson was drilled through the Salt sand at 810-61 feet, without a show of oil or gas and will be abandoned. In section 24, Center Township, Lowe & Spangler No. 8 William Perry made a small show of oil at 229-49 feet, but will probably be drilled deeper.

Whitten Creek Oil & Gas Co. No. 7 Arthur Hupp, in section 24, Washington Township, Monroe County, which made 131,000 feet of gas in the Injun sand at 1,491-95 feet, has turned the gas into the line and is making 3 bbls. of oil a day. Stout & Shafer No. 4 Frank Starkey, in section 5, Adams Township, gauged 319,000 feet of gas naturally in the Keener sand at 1,695-96 feet. In section 11, Franklin Township, Greene Oil Co. No. 6 Ivan Miracle, (Harry Crum) is being deepened from the Injun sand at 1,333 feet. In section 32, same township, Hines Brothers & Co. are rigged up for a test on the Nancy Smith property.

In Washington County, Lot 2, Muskingum Township, Charles Vaughn, No. 9 Adna Vaughn was drilled to 725 feet without finding the Macksburg 500-foot sand, and has been abandoned. In section 19, Liberty Township, Otto Heldman & Co. are spudding in a test on the Marion Epler property. In section 28, Newport Township, Schneider Oil Co. No. 10 William Covey was completed in the Macksburg 500-foot sand at 1,142-62 feet and made 3 bbls. of oil after a shot of 60 quarts. In section 27, same township, H. H. Ull & Co. have staked a location for a test on the W. V. Torner property. In section 11, Marietta Township, Hupp & Yerian No. 8, Washington County Infirmary, made a show of oil in the Michel sand at 421-38 feet and is being cleaned out after a shot of 75 pounds of gelatine.

In Athens County, section 5, York Township, Chartiers Oil Co. No. 3 E. Stratton, which made a show of oil naturally in the Clinton sand at 3,492-3,516 feet, was shot with 30 quarts and has an estimated production of 18 bbls. In section 11, Lodi Township, A. D. Townsend No. 2 Jacob Niggemeyer, which made 2 bbls. naturally in the First Berea sand and 60,000 feet of gas in the second Berea, was shot in the Second Berea with 25 quarts and gauged 338,000 feet of gas and has been put on a pump. In section 12, same township, C. W. Nuzum No. 1 Perry Judson made a small show of oil in the first Berea at 1,465-76 feet and a small show of gas in the second Berea at 1,523-33 feet but has been abandoned and recorded as a dry hole.

In Meigs County, section 22, Bedford Township, A. H. Bengel No. 2 Cora Ater & Co. made a show of gas and a hole full of water in the Maxon sand at 890-902 feet and has been abandoned. In section 1, Rutland Township, Wilford & Co. are moving a machine on location for a test on the H. Wilford property. In section 33, Salisbury Township, Smith Oil Co. No. 1 E. Bailey made a good show of gas in the Salt sand at 695-710 feet and also made a good show of gas in the Macksburg 800-foot sand and is drilling to the Maxon. In section 18, Lebanon Township, Vienne Drilling Co. No. 1 A. Williams was drilled through the first Berea sand at 2,123-24 feet without a show of oil or gas and has been abandoned. In section 19, Meigs Developing Co. No. 1 M. Watson heirs, which made 187,000 feet of gas naturally, was not increased by a shot of 20 quarts. It was drilled through the Berea sand at 2,160-64 feet.

Ontario Pipe Line Franchise

TILLSONBURG, Ontario — Application was made recently by Otter River Pipe Line Corp., Ltd., to the Ontario Municipal Board for a franchise to lay 7 miles of line to Tillsonburg and Straffordville from wells southeast of Tillsonburg.

"A Rod Job for $4.20?"

Franks truck motor driven single drum winch with mast for over the road position.

A major company with FRANKS WINCH AND MAST, on wells from 2,000 to 3,000 feet shows actual cost of but $4.20 per rod job (all labor, depreciation, repairs, tires, gas, oil, etc., included) over a two-year period.

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Summary of Operations, All Fields for May

SUMMARY OF ALL FIELDS

Wells Completed

	Comp.	Prod.	Dry	Gas
Penna. Grade fields	495	292	0	52
Lima	6	2	3	0
Central Ohio	84	638	21	38
Indiana	8	25	3	2
Kentucky	69	1,224	10	13
Illinois	14	2,899	3	1
Michigan	90	41,615	18	9
Mississippi	2		0	2
Kansas	199	143,949	43	7
Oklahoma	267	62,007	62	8
North Cent. Texas	212	12,692	88	5
West Texas	247	190,627	18	0
Texas Panhandle	49	16,254	0	15
East Texas	166	6,099	8	0
East Central Texas	70	15,483	10	0
E. Texas border counties	27	7,550	4	5
Gulf Coast, Texas	168	51,402	35	11
Southwest Texas	322	35,195	85	15
Gulf Coast, Louisiana	37	16,602	2	0
North Louisiana	71	16,043	17	6
Arkansas	16	1,770	10	0
Montana	28	2,221	6	1
Wyoming	13	5,769	4	1
Colorado	1		1	0
New Mexico	59	63,925	2	0
Total May	2,720	694,283	453	191
Total April	2,529	682,013	498	186
Difference	177	9,371	48	4

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Penna. Grade fields	103	432	535
Lima	7	32	39
Central Ohio	72	186	258
Indiana	0	35	35
Kentucky	0	78	78
Illinois	3	36	39
Michigan	82	168	250
Florida	2	4	6
Alabama	1	2	3
Mississippi	7	11	18
Kansas	78	390	468
Oklahoma	62	450	512
North Cent. Texas	61	256	317
West Texas	140	468	608
Texas Panhandle	68	192	260
East Texas	71	106	177
East Central Texas	21	92	113
E. Texas border counties	5	57	62
Gulf Coast, Texas	32	148	180
Southwest Texas	77	203	280
Gulf Coast, Louisiana	22	89	111
North Louisiana	26	118	144
Arkansas	10	33	43
Montana	5	68	73
Wyoming	15	61	76
Colorado	4	34	38
New Mexico	21	154	175
Utah	1	9	10
Nebraska	0	4	4
Total May	996	3,916	4,912
Total April	968	3,683	4,651
Difference	28	233	261

KANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Barber	0	0	0	2	4	6
Barton	21	15,202	9	6	29	35
Butler	7	235	3	4	12	16
Chase	1	137	0	0	1	1
Chautauqua	6	100	1	1	19	20
Coffey	0	0	0	0	3	3
Cowley	9	2,867	3	4	14	18
Decatur	0	0	0	1	0	1
Edwards	0	0	0	0	1	1
Elk	0	0	0	0	4	4
Ellis	17	19,593	3	7	31	38
Ellsworth	7	3,710	2	1	11	12
Grant	0	0	0	0	1	1
Greenwood	7	180	5	1	13	14
Hamilton	0	0	0	0	1	1
Harvey	2	156	1	4	3	7
Harper	0	0	0	0	1	1
Haskell	0	0	0	0	1	1
Kearny	0	0	0	0	1	1
Kingman	1	0	0	0	0	0
Logan	0	0	0	0	1	1
Lyon	0	0	0	0	2	2
Marion	0	0	0	1	1	2
McPherson	8	2,262	2	2	17	19
Meade	0	0	0	1	0	1
Mitchell	0	0	0	0	1	1
Morton	0	0	0	0	1	1
Ness	0	0	0	1	1	2
Osborne	0	0	0	0	1	1
Pawnee	1	0	1	0	0	0
Pratt	0	0	0	1	0	1
Reno	20	17,121	2	5	28	33
Rice	37	43,283	1	12	64	76
Rooks	1	0	1	0	11	11
Rush	4	517	2	2	9	11
Russell	33	32,437	2	14	61	75
Scott	0	0	0	0	2	2
Sedgwick	2	0	2	0	5	5
Seward	0	0	0	0	1	1
Stafford	6	5,059	1	5	9	14
Stevens	0	0	0	0	4	4
Sumner	3	791	0	2	13	15
Trego	0	0	0	0	4	4
Woodson	6	299	2	1	4	5
Ttl May	199	143,949	43	78	390	468
Ttl. Apr.	243	155,525	50	72	382	454
Difference	44	11,576	7	6	8	14

May gas well completions: Cowley, 1; Chautauqua, 3; Kingman, 1; McPherson, 1; Rush, 1.

OKLAHOMA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Atoka	1	0	1	0	1	1
Alfalfa	0	0	0	0	1	1
Beckham	0	0	0	0	3	3
Caddo	0	0	0	0	6	6
Carter	15	1,555	0	2	19	21
Cleveland	3	4,837	0	1	11	12
Coal	0	0	0	0	3	3
Comanche	1	0	1	2	7	9
Cotton	2	33	0	0	3	3
Creek	10	149	3	5	28	33
Garfield	2	122	1	0	1	1
Garvin	4	484	3	1	8	9
Grady	1	0	1	0	2	2
Grant	0	0	0	2	1	3
Greer	0	0	0	0	1	1
Harmon	0	0	0	0	1	1
Haskell	0	0	0	0	1	1
Hughes	3	270	0	2	20	22
Jackson	3	87	1	0	2	2
Jefferson	8	307	2	0	4	4
Johnston	0	0	0	0	1	1
Kay	2	600	0	0	7	7
Kiowa	1	0	1	0	4	4
Latimer	0	0	0	0	1	1
LeFlore	1	0	1	0	0	0
Lincoln	3	2,381	0	2	6	8
Logan	5	8,313	0	2	8	10
Love	0	0	0	0	2	2
Marshall	1	0	1	0	2	2
Murray	0	0	0	0	3	3
Muskogee	5	0	3	2	10	12
Noble	7	5,214	0	1	15	16
Okfuskee	25	1,010	6	1	11	12
Oklahoma	12	9,292	0	6	25	31
Okmulgee	9	102	4	4	21	25
Osage	19	919	8	3	34	37
Pawnee	3	3	1	0	1	1
Payne	0	0	0	0	3	3
Pittsburg	0	0	0	0	1	1
Pontotoc	43	13,873	3	11	76	87
Pottawatomie	8	2,017	1	1	13	14
Pushmataha	0	0	0	0	1	1
Seminole	21	10,317	3	7	41	48
Stephens	9	42	3	1	11	12
Texas	0	0	0	0	3	3
Tillman	1	0	1	0	4	4
Tulsa	37	680	11	4	15	19
Wagoner	2	0	2	2	6	8
Washita	0	0	0	0	2	2
Ttl. May	267	62,007	62	62	450	512
Ttl. Apr.	342	74,739	92	62	472	534
Difference	75	12,732	30	0	22	22

Gas well completions: Creek 1, Muskogee 2, Jackson 1, Pontotoc 1, Tulsa 1, Stephens 1, Kay 1.

GULF COAST

Louisiana

Summary of Field Operations

Field—	Comp.	Prod.	Abd.	Rigs	Dlg.	Ttl.
Abbeville	0	0	0	1	0	1
Bayou Blue	0	0	0	1	0	1
Bayou Bouillon	0	0	0	0	1	1
Bay St. Elaine	0	0	0	0	2	2
Bayou Cocotriz	0	0	0	1	1	2
Big Lake	1	560	0	1	0	1
Black Bayou	0	0	0	0	1	1
Caillou Island	1	513	0	0	3	3
Cameron Meadows	1	450	0	0	1	1
Charenton	0	0	0	0	2	2
Choctaw	0	0	0	0	1	1
Darrow	0	0	0	0	1	1
Dog Lake	0	0	0	0	1	1
Fausse Point	0	0	0	0	1	1
Gillis	0	0	0	1	5	6
Garden Island	0	0	0	0	1	1
Hackberry	3	1,565	0	3	6	9
Iowa	1	522	0	0	1	1
Jeanerette	2	1,638	0	0	3	3
Jennings	1	24	0	2	9	11
Lafitte	1	1,285	0	0	3	3
Lake Barre	1	546	0	0	0	0
Lake Hermitage	1	0	1	1	0	1
Lake Pelto	1	804	0	0	0	0
Laritte	1	888	0	0	0	0
Leesville	3	1,796	1	0	3	3
Lockport	0	0	0	0	1	1
New Iberia	3	2,730	0	3	4	7
Port Barre	0	0	0	0	1	1
Roanoke	1	812	0	0	1	1
Sorrento	0	0	0	0	1	1
South Roanoke	1	46	0	1	0	1
Starks	0	0	0	0	1	1
South Jennings	0	0	0	0	1	1
St. Martinsville	1	456	0	1	1	2
Sulphur	2	770	0	0	1	1
Tepetate	1	285	0	2	2	4
Valentine	1	624	0	1	2	3
Vinton	1	288	0	0	3	3
White Castle	0	0	0	0	1	1
Miscellaneous	8	0	8	3	23	26
Ttl. May	37	16,602	2	22	89	111
Ttl. Apr.	28	7,281	11	20	98	118
Difference	9	9,321	9	2	9	7

Texas

Summary of Field Operations

Field—	Comp.	Prod.	Abd.	Rigs	Dlg.	Ttl.
Ace	1	0	1	0	0	0
Amelia	17	7,630	3	5	11	16
Anahuac	11	5,834	0	2	4	6
Bammel	0	0	0	0	1	1
Bay City	0	0	0	0	1	1
Barbers Hill	1	516	0	0	2	2
Batson	0	0	0	0	1	1
Big Hill	0	0	0	0	2	2
Big Creek	0	0	0	1	1	2
Blue Ridge	1	503	0	2	0	2
Boling	1	0	1	0	2	2
Clay Creek	1	0	1	0	0	1
Cleveland	1	133	0	1	0	1
Cotton Lake	1	460	0	0	1	1
Dickinson	5	2,074	0	0	10	10
Esperson	0	0	0	0	1	1
Fairbanks	0	0	0	0	1	1
Fannett	1	691	0	0	1	1
Five Corners	1	114	0	0	1	1
Ganado	0	0	0	0	1	1
Greens Lake	1	0	1	0	0	0
Hankamer	1	0	0	0	0	0
Hastings	22	12,212	1	4	12	16
Hawkinsville	0	0	0	0	1	1
Heyser	8	1,357	1	1	4	5
High Island	0	0	0	0	4	4
Hull	2	440	0	0	3	3
Humble	0	0	0	0	1	1
Katy	1	0	0	0	0	0
Keeran	0	0	0	0	2	2
Labelle	0	0	0	0	1	1
Lake View	1	0	1	0	0	0
Lockridge	4	998	2	1	3	4
Livingston	1	384	0	0	1	1
Manvel	4	1,354	1	0	3	3
Louise	1	0	1	0	2	2
Markham	0	0	0	1	0	1
Nome	7	1,751	1	2	2	4
Old Ocean	0	0	0	0	1	1
Orchard	0	0	0	0	2	2
Palacios	0	0	0	0	1	1
Pickett Ridge	1	60	0	0	1	1
Pierce Junction	1	34	0	0	1	1
Placedo	13	2,192	0	1	10	11
Raccoon Bend	5	60	4	0	1	1
Refugio	0	0	0	0	2	2
Sandy Point	0	0	0	0	2	2
Silsbee	3	1,932	0	1	3	4
Seabreeze	0	0	0	0	2	2
Segno	6	1,784	1	1	4	5
Sour Lake	1	0	0	0	0	0
South Houston	6	1,972	0	0	3	3
Spanish Camp	2	0	0	0	0	0
Spurger	1	460	0	0	1	1
Thompson	0	0	0	1	1	2
Tomball	10	2,702	2	2	5	7
Turtle Bay	1	480	0	1	0	1
Quintana-O'Connor	6	1,702	0	1	7	8
Van Vleck	3	1,325	1	0	1	1
Withers	3	248	1	0	3	3
Miscellaneous	11	0	11	4	16	20
Ttl. May	168	51,402	35	32	148	180
Ttl. Apr.	118	40,081	23	35	150	185
Difference	50	1,321	12	3	2	5

Gas completions: Amelia, 1; Anahuac, 1; Hankamer, 1; Heyser, 1; Katy, 1; Nome, 1; Placedo, 1; Sour Lake, 1; Spanish Camp, 2; Tomball, 1; total, 11.

EAST AND EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Anderson	7	536	1	8	14	22
Angelina	5	15	2	0	3	3
Bowie	0	0	0	0	4	4
Cherokee	0	0	0	0	1	1
Fannin	0	0	0	0	3	3
Franklin	10	2,543	0	1	5	6
Freestone	0	0	0	0	4	4
Gregg	66	2,337	1	38	40	78
Henderson	2	344	0	3	7	10
Hill	0	0	0	0	1	1
Hopkins	6	2,998	2	0	6	6
Houston	1	24	0	1	2	3
Hunt	1	0	1	0	2	2
Kaufman	0	0	0	0	1	1
Lamar	2	0	2	1	1	2
Limestone	0	0	0	0	1	1
Red River	0	0	0	0	2	2
Rusk	56	2,419	2	17	43	60
Smith	9	323	0	2	3	5
Titus	33	9,020	1	6	30	36
Upshur	35	1,020	5	14	19	33
Van Zandt	3	3	1	1	5	6
Wood	0	0	0	0	1	1
Ttl. May	236	21,582	18	92	198	290
Ttl. April	243	23,776	13	104	189	293
Difference	7	2,194	5	12	9	3

Gas wells completed: Anderson County, 1.

CENTRAL AND NORTH TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Archer	24	159	15	1	7	8
Brown	1	25	0	0	4	4
Callahan	2	0	2	2	2	4
Clay	5	107	3	0	5	5
Coleman	0	0	0	0	5	5
Collin	0	0	0	0	1	1
Comanche	0	0	0	0	1	1
Cooke	19	957	5	1	17	18
Denton	3	0	3	3	6	9
Eastland	5	20	1	1	3	4
Foard	0	0	0	0	2	2
Grayson	1	0	1	0	3	3
Hardeman	1	0	1	0	1	1
Haskell	0	0	0	0	2	2
Jack	39	5,433	9	21	63	84
Knox	0	0	0	0	1	1
McCulloch	0	0	0	0	2	2
Montague	16	450	6	2	15	17
Palo Pinto	2	30	0	0	5	5
Shackelford	22	1,073	8	2	19	21
Stephens	0	0	0	1	4	5
Tarrant	0	0	0	0	1	1
Throckm'ton	1	0	1	0	1	1
Wichita	24	2,140	10	2	24	26
Wilbarger	9	1,555	3	8	16	24
Wise	1	0	1	0	1	1
Young	37	743	19	17	45	62
Ttl. May	212	12,692	88	61	256	317
Ttl. April	223	17,376	87	57	241	298
Difference	11	4,684	1	4	15	19

Gas wells completed: Eastland 1, Jack 3, Palo Pinto 1. Total 5.

WEST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Andrews	4	2,429	0	5	13	18
Bailey	0	0	0	1	1	2
Brewster	0	0	0	0	3	3
Cochran	0	0	0	1	1	2
Coke	0	0	0	0	2	2
Crane	13	11,908	1	3	24	27
Crockett	0	0	0	1	3	4
Dawson	0	0	0	1	2	3
Ector	44	32,546	0	42	95	137
Edwards	0	0	0	0	2	2
El Paso	0	0	0	0	1	1
Fisher	1	240	0	1	4	5
Gaines	0	0	0	2	8	10
Garza	0	0	0	1	1	2
Glasscock	3	923	0	2	1	3
Hockley	0	0	0	1	2	3
Howard	16	7,301	0	6	20	26
Hudspeth	0	0	0	1	1	2
Jeff Davis	0	0	0	1	1	2
Jones	18	7,082	4	11	30	41
Kimble	0	0	0	0	1	1
Loving	0	0	0	4	2	6
Menard	0	0	0	0	1	1
Mitchell	0	0	0	0	1	1
Pecos	11	5,845	3	3	42	45
Presidio	0	0	0	0	3	3
Reagan	0	0	0	1	1	2
Reeves	0	0	0	1	1	2
Runnels	0	0	0	1	3	4
Schleicher	1	0	1	1	1	2
Scurry	0	0	0	1	3	4
Stonewall	0	0	0	0	1	1
Taylor	3	0	3	1	2	3
Terry	0	0	0	1	1	2
Upton	32	16,907	2	7	39	46
Ward	41	48,708	3	12	67	79
Winkler	59	56,166	1	27	80	107
Yoakum	1	572	0	0	4	4
Ttl. May	247	190,627	18	140	468	608
Ttl. April	215	169,577	22	115	439	554
Difference	32	21,050	4	25	29	54

Gas wells completed: None.

TEXAS PANHANDLE

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Briscoe	0	0	0	0	1	1
Carson	6	2,907	2	7	18	25
Childress	0	0	0	1	0	1
Colli'gswo'th	0	0	0	0	2	2
Cottle	0	0	0	1	0	1
Dallam	0	0	0	0	1	1
Deaf Smith	0	0	0	0	1	1
Gray	18	7,877	0	27	58	85
Hutchinson	15	5,391	0	21	73	94
Moore	7	0	0	6	26	32
Ochiltree	0	0	0	0	1	1
Potter	0	0	0	0	1	1
Randall	0	0	0	0	1	1
Roberts	0	0	0	0	2	2
Wheeler	3	79	0	5	7	12
Ttl. May	49	16,254	0	68	192	260
Ttl. April	62	21,493	3	51	174	225
Difference	13	5,239	3	17	18	35

Gas wells completed: Carson 2, Gray 2, Hutchinson 3, Moore 7, Wheeler 1. Total 15.

EAST TEXAS (Border Counties)

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Bowie	1	0	1	0	4	4
Cass (Rodessa)	18	7,240	2	4	32	36
Cass (other)	1	0	1	0	0	0
Harrison	3	38	0	0	4	4
Marion	3	260	0	1	9	10
Panola	1	12	0	0	5	5
Shelby	0	0	0	0	3	3
Ttl. May	27	7,550	4	5	57	62
Ttl. Apr.	31	8,290	4	4	48	52
Difference	4	740	0	1	9	10

Gas production: Cass County, 2 wells, 104,000,000 feet; Marion County, 1 well, 4,000,000 feet; total of gas wells 3.

NORTH LOUISIANA

Summary of Field Operations

Parish—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Bienville	0	0	0	0	4	4
Bossier	4	345	1	0	8	8
Caddo-Rodessa	10	3,474	0	2	16	18
Caddo-other	17	370	5	2	18	20
Caldwell	1	0	1	0	0	0
Catahoula	0	0	0	1	0	1
Claiborne	21	11,573	2	2	22	24
DeSoto	4	50	3	2	3	5
Franklin	1	0	1	0	1	1
Grant	1	30	0	0	5	5
Jackson	0	0	0	0	1	1
LaSalle	3	97	1	1	0	1
Lincoln	0	0	0	3	3	6

Morehouse	2	0	0	2	2	4
N'tchit'ches	2	0	2	0	2	2
Ouachita	0	0	0	3	3	6
Red River	2	83	0	0	3	3
Sabine	1	0	0	2	7	9
Tensas	1	0	1	0	2	2
Union	1	0	0	2	6	8
Webster	0	0	0	4	12	16
Ttl. May	71	16,043	17	26	118	144
Ttl. Apr.	45	5,377	10	28	106	134
Difference	26	10,666	7	2	12	10

Gas production: Caddo-Rodessa, 1 well, 13,900,000 feet; Caddo-other, 1 well, 500,000 feet; Morehouse, 2 wells, 9,000,000 feet; Sabine, 1 well, 2,000,000 feet; Union, 1 well, 2,000,000 feet; total gas wells, 6.

ARKANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Calhoun	0	0	0	0	1	1
Cleveland	0	0	0	0	1	1
Clark	0	0	0	1	1	2
Columbia	0	0	0	1	0	1
Dallas	0	0	0	0	1	1
Hempstead	1	0	1	0	4	4
Lafayette	1	0	1	0	2	2
Little River	0	0	0	0	2	2
Lonoke	0	0	0	1	1	2
Miller	2	0	2	2	4	6
Nevada	4	290	1	4	5	9
Ouachita	3	0	3	1	1	2
Paluski	0	0	0	0	1	1
Saline	0	0	0	0	1	1
Sevier	1	0	1	0	0	0
Union	4	1,480	1	0	8	8
Ttl. May	16	1,770	10	10	33	43
Ttl. Apr.	7	403	2	13	38	51
Difference	9	1,362	8	3	5	8

No gas wells.

ALABAMA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Choctow	0	0	0	0	1	1
Greene	0	0	0	1	0	1
Houston	0	0	0	0	1	1
Ttl. May	0	0	0	1	2	3
Ttl. Apr.	0	0	0	1	2	3
Difference	0	0	0	0	0	0

No gas wells.

MISSISSIPPI

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rgs.	Dlg.	Ttl.
Amity	0	0	0	0	1	1
Hinds	2	0	0	0	0	0
Bolivar	0	0	0	1	1	2
Sunflower	0	0	0	1	0	1
Wilkinson	0	0	0	1	0	1
Washington	0	0	0	0	1	1
Simpson	0	0	0	1	0	1
Claiborne	0	0	0	0	1	1
Jones	0	0	0	0	1	1
George	0	0	0	0	1	1
Grenada	0	0	0	0	0	0
Lamar	0	0	0	0	2	2
Harrison	0	0	0	0	1	1
Yalobusha	0	0	0	1	0	1
Kemper	0	0	0	1	0	1
Perry	0	0	0	0	1	1
Pike	0	0	0	0	1	1
Ttl. May	2	0	0	7	11	18
Ttl. Apr.	1	0	1	4	11	15
Difference	1	0	1	3	0	3

Gas completions: Hinds County, 2 wells.

SOUTHWEST TEXAS

Summary of Field Operations

Field—	Comp.	Prod.	Abd.	Rgs.	Dlg.	Ttl.
Agua Dulce	1	0	0	1	2	3
Alta Mesa	2	385	0	0	1	1
Alta Verde	1	0	1	2	0	2
Alworth	1	0	0	0	0	0
Armagosa	0	0	0	1	0	1
Baldwin	1	0	1	0	0	0
Barbacoas	0	0	0	0	1	1
Batesville	1	4,000	0	1	0	1
Bentonville	0	0	0	1	2	3
Eruni-Cole	4	830	0	1	2	3
Buchanan	1	40	0	2	0	2
Byersville	2	50	1	1	0	1
Chapman Ranch	2	0	2	0	1	1
Charamousca	3	160	1	0	0	0
Charco Redondo	1	0	1	0	0	0
Clara Driscoll	1	135	0	0	1	1
Colmena	5	275	1	1	2	3
Cooksey	1	0	1	0	0	0
Cuellar	3	0	2	0	0	0
Cuevitas	0	0	0	0	1	1
Darst Creek	7	450	3	1	4	5
Driscoll	1	110	0	0	1	1
Dunlap	2	60	1	1	1	2
Escobas	31	920	8	1	6	7
Ezell Ranch	1	0	0	1	0	1
Flour Bluff	10	1,680	0	0	8	8
Govt. Wells	4	40	2	0	1	1
Haynes	4	0	3	0	0	0
Hoffman	1	0	1	0	1	1
Hords C'k.	1	0	1	0	0	0
Ina	2	35	0	0	0	0
Jacob	5	50	2	2	1	3
Killam	5	330	0	1	2	3
Kingsville	1	25	0	1	0	1
Kohler	6	590	2	2	1	3
Labbe	1	50	0	0	2	2
La Sal Vieja	0	0	0	0	1	1
Loma Alta	0	0	0	1	0	1
Loma Novia	12	1,150	3	0	2	2
London	2	0	0	1	0	1
Lone Oak	1	0	1	0	0	0
Lopena	0	0	0	0	1	1
Lopez	14	2,795	1	1	3	4
Los Olmos	1	5	0	0	1	1
Luling-Branyon	28	5,910	2	5	10	15
Margo	0	0	0	1	0	1
Martinez	1	0	1	0	0	0
McCampbell	11	1,430	0	1	5	6
Mercedes	1	0	0	1	0	1
Midway	1	60	0	0	1	1
Nolte	1	0	1	0	1	1
No. Jacob	1	5	0	0	1	1
No. Pettus	1	30	0	1	0	1
No. Sweeden	1	125	0	2	5	7
Oakville	1	0	1	0	0	0
O'Hern	9	2,110	1	1	2	3
Palangana	0	0	0	0	2	2
Pearsall	0	0	0	1	3	4
Piedra Lumbre	5	340	0	0	1	1
Plummer	1	20	0	1	1	2
Plymouth	6	775	2	0	2	2
Ricaby	1	0	1	0	0	0
Rio Grande City	0	0	0	1	1	2
Samfordyce	2	230	0	3	0	3
Salt Flats	3	655	0	2	2	4
Sandia	0	0	0	0	2	2
Sarnosa	0	0	0	0	1	1
Saxet	39	5,660	1	3	38	43
Saxet Hgts.	6	420	0	2	4	6
Strouch	3	0	3	0	0	0
Seven Sisters	5	1,180	1	1	2	3
So. Calliham	1	75	0	0	0	0
So. Clara Driscoll	1	360	0	0	0	0
So. Hoffman	1	0	1	0	0	0
So. Ricaby	1	0	1	0	1	1
Stratton	1	45	0	0	0	0
Sullivan	1	10	0	0	1	1
Sweden	1	0	0	1	1	2
Taft	7	835	1	0	2	2
Thomas-Lockhart	0	0	0	0	1	1
Von Ormy	3	15	0	1	1	2
W. Premont	7	735	2	0	7	7
W. Tuleta	0	0	0	0	1	1
White Point	0	0	0	1	0	1
Zoboroski	0	0	0	0	4	4
Misc.	29	5	27	22	51	73
Ttl. May	322	35,195	85	77	203	280
Ttl. Apr.	224	31,325	70	67	177	244
Difference	98	3,870	15	10	26	36

Gas completions: Agua Dulce 1, Alworth 1, Colmena 1, Cuellar 1, Ezell Ranch 1, Haynes 1, Killam 1, Kohler 1, London 2, McCampbell 1, Mercedes 1, Saxet 1, Sweden 1, miscellaneous 1; total 15.

ROCKY MOUNTAIN AREA

Montana

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Big Horn	1	0	0	2	2	
Carbon	0	0	0	0	3	3
Fallon	1	200	0	0	1	1
Fergus	0	0	0	0	8	8
Glacier	11	1,371	2	3	19	22
Petroleum	0	0	0	0	3	3
Phillips	0	0	0	0	3	3
Pondera	1	0	1	1	2	3
Toole	13	650	2	1	19	20
Yellowstone	1	0	1	0	2	2
Miscellaneous	0	0	0	0	6	6
Ttl. May	28	2,221	6	5	68	73
Ttl. Apr.	11	395	2	8	56	64
Difference	17	1,826	4	3	12	11

Gas completions: Big Horn, 1; Toole, 1.

Utah

Summary of Field Operations

	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Total May	0	0	0	1	9	10
Total April	0	0	0	2	7	9
Difference	0	0	0	1	2	1

Nebraska

Summary of Field Operations

	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Total May	0	0	0	0	4	4
Total April	0	0	0	0	3	3
Difference	0	0	0	0	1	1

Colorado

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Adams	0	0	0	0	2	2
Archuleta	0	0	0	1	6	7
Fremont	1	0	1	0	0	0
La Plata	0	0	0	0	3	3
Larimer	0	0	0	1	2	3
Las Animas	0	0	0	0	2	2
Moffat	0	0	0	2	5	7
Park	0	0	0	0	3	3
Miscellaneous	0	0	0	0	11	11
Ttl. May	1	0	1	4	34	38
Ttl. Apr.	1	0	1	0	31	31
Difference	0	0	0	4	3	7

New Mexico

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Bernalillo	0	0	0	0	2	2
McKinley	0	0	0	0	6	6
Santa Fe	0	0	0	0	2	2
San Juan	2	0	0	1	4	5
San Miguel	0	0	0	0	3	3
Socorro	0	0	0	0	1	1
Valencia	0	0	0	0	2	2
Lea	57	63,879	1	18	107	125
Eddy	2	46	1	1	18	19
Roosevelt	0	0	0	0	1	1
Curry	0	0	0	0	1	1
Otero	0	0	0	0	1	1
Dona Ana	0	0	0	0	1	1
Chaves	0	0	0	0	1	1
Quay	0	0	0	0	1	1
Mora	0	0	0	1	1	1
Harding	0	0	0	0	3	3
Total May	61	63,925	2	21	154	175
Total April	69	91,142	5	24	151	175
Difference	8	27,217	3	3	3	0

Wyoming

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Albany	1	500	0	1	3	4
Big Horn	1	500	0	1	9	10
Carbon	2	3,240	1	3	4	7
Converse	1	0	0	2	4	6
Fremont	0	0	0	1	4	5
Lincoln	0	0	0	0	4	4
Natrona	1	130	0	0	6	6
Niobrara	3	1,392	1	3	11	14
Park	0	0	0	1	2	3
Sheridan	1	0	1	0	0	0
Uinta	0	0	0	1	2	3
Washakie	0	0	0	0	5	5
Weston	3	7	1	2	3	5
Miscellaneous	0	0	0	0	4	4
Ttl. May	13	5,769	4	15	61	76
Ttl. Apr.	5	4,862	0	13	52	65
Difference	8	907	4	2	9	11

Gas completion: Converse County, 1.

PENNSYLVANIA GRADE FIELDS

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Bradford	232	292	0	15	87	102
Allegany	95	69	0	9	35	44
Venango-Clarion	43	65	1	8	29	37
Butler-Armstrong	5	6	2	6	14	20
N.Y.-Penna. Gas	5	0	3	6	17	23
SW Penn.	13	444	2	11	37	48
SE Ohio	39	484	9	16	51	67
West Virginia	63	76	13	32	162	194
Total May	495	1,434	30	103	432	535
Total April	388	644	35	72	361	433
Difference	107	790	5	15	31	102

Gas wells completed: Venango-Clarion 1, N.-Y. Pennsylvania gas field 2, Southwest Pennsylvania 4, Southeast Ohio 12, West Virginia 36. Total 52.

CENTRAL OHIO FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Ashland	1	0	1	1	8	9
Ashtabula	0	0	0	0	1	1
Athens	6	9	2	6	8	14
Belmont	2	5	0	3	6	9
Coshocton	2	174	1	2	4	6
Cuyahoga	0	0	0	0	2	2
Delaware	0	0	0	0	1	1
Fairfield	3	0	0	3	4	7
Guernsey	3	0	1	4	17	21
Gallia	1	0	0	0	1	1
Huron	3	0	0	3	3	6
Holmes	2	37	0	3	3	6
Hocking	4	6	2	3	6	9
Jefferson	1	1	0	0	1	1
Knox	8	177	1	3	10	13
Lawrence	0	0	0	0	1	1
Licking	5	192	0	3	8	11
Lorain	3	0	2	4	5	9
Medina	3	1	0	0	4	4
Meigs	6	0	2	3	14	17
Morgan	10	12	1	2	9	11
Monroe	5	5	2	5	7	12
Muskingum	0	0	0	1	4	5
Noble	0	0	0	2	9	11
Perry	2	15	0	8	6	14
Portage	0	0	0	0	1	1
Richland	0	0	0	0	4	4
Stark	1	0	1	1	10	11
Summit	4	0	0	3	3	6
Tuscarawas	0	0	0	3	6	9
Wayne	1	0	1	0	6	6
Washington	8	4	4	6	11	17
Vinton	0	0	0	0	3	3
Ttl. May	84	638	21	72	186	258
Ttl. Apr.	103	114	32	67	170	237
Difference	19	524	11	5	16	21

Gas completions: Athens, 2; Belmont, 1; Fairfield, 3; Guernsey, 2; Gallia, 1; Huron, 3; Holmes, 1; Hocking, 1; Knox, 5; Lorain, 1; Medina, 2; Meigs, 4; Morgan, 2; Monroe, 2; Perry, 1; Summit, 4; Washington, 3; total, 38.

MICHIGAN

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Alcona	0	0	0	1	0	1
Allegan	2	700	0	3	5	8
Arenac	2	250	0	3	16	19
Cass	0	0	0	0	1	1
Cheboygan	0	0	0	1	0	1
Clare	1	0	1	0	0	0
Emmett	0	0	0	1	0	1
Gladwin	48	37,606	3	36	91	127
Gratiot	3	0	1	3	3	6
Hillsdale	0	0	0	0	2	2
Ingham	0	0	0	0	1	1
Iosco	0	0	0	0	1	1
Isabella	9	2,267	1	4	17	21
Jackson	0	0	0	1	0	1
Kent	2	0	2	0	1	1
Lapeer	1	0	1	0	0	0
Lenawee	1	0	1	1	0	1
Mecosta	0	0	0	0	2	2
Midland	4	410	1	5	4	9
Missaukee	0	0	0	0	1	1
Monroe	1	0	1	0	0	0
Montcalm	7	0	4	9	4	13
Muskegon	2	0	0	0	1	1
Newaygo	0	0	0	0	1	1
Oceana	0	0	0	0	1	1
Okemaw	4	382	0	9	9	18
Osceola	0	0	0	1	0	1
Otsego	0	0	0	1	1	2
Saginaw	1	0	1	1	3	4
St. Clair	0	0	0	1	0	1
Shiawassee	0	0	0	0	2	2
Tuscola	0	0	0	1	0	1
Washtenaw	1	0	1	0	0	0
Wayne	1	0	1	0	1	1
Ttl. May	90	41,615	18	82	168	250
Ttl. April	82	28,908	32	95	132	227
Difference	8	12,707	14	13	36	23

Gas wells completed: Clare, 1 for 1,460,000 ft.; Gratiot, 2 for 4,337,000; Isabella, 1, 750,000; Montcalm, 3, 85,558,000 and Muskegon, 2, 1,450,000.

LIMA FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Allen	0	0	0	0	1	1
Auglaize	1	0	1	1	0	1
Darke	0	0	0	0	1	1
Hardin	0	0	0	0	4	4
Henry	1	1	0	1	3	4
Hancock	0	0	0	0	3	3
Mercer	0	0	0	0	2	2
Ottawa	0	0	0	1	0	1
Putnam	0	0	0	2	2	4
Logan	0	0	0	0	2	2
Lucas	0	0	0	0	2	2
Sandusky	1	0	1	0	2	2
Shelby	0	0	0	1	2	3
Seneca	2	1	0	1	3	4
Wood	1	0	1	0	3	3
Wyandot	0	0	0	0	2	2
Ttl. May	6	2	3	7	32	39
Ttl. Apr.	4	12	1	5	34	39
Difference	2	10	2	2	2	0

INDIANA FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Daviess	0	0	0	0	1	1
DeKalb	0	0	0	0	1	1
DuBois	1	0	1	0	0	0
Gibson	1	0	1	0	1	1
Harrison	0	0	0	0	1	1
Knox	2	0	0	0	1	1
Lagrange	0	0	0	0	2	2
Martin	1	0	1	0	1	1
Perry	0	0	0	0	2	2
Pike	1	5	0	0	3	3
Spencer	0	0	0	0	3	3
Sullivan	1	10	0	0	1	1
Vanderburgh	1	10	0	0	0	0
Vigo	0	0	0	0	2	2
Decatur	0	0	0	0	2	2
Hancock	0	0	0	0	2	2
Hamilton	0	0	0	0	2	2
Jay	0	0	0	0	2	2
Posey	0	0	0	0	1	1
Randolph	0	0	0	0	1	1
Ripley	0	0	0	0	2	2
Shelby	0	0	0	0	2	2
Warrick	0	0	0	0	2	2
Ttl. May	8	25	3	0	35	35

Gas completions: Knox County, 2.

KENTUCKY FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Powell	5	8	2	0	3	3
Elliott	1	5	0	0	0	0
Lee	2	100	1	0	7	7
Estill	13	59	0	0	6	6
Lawrence	3	9	0	0	2	2
Johnson	1	0	0	0	1	1
Magoffin	3	13	0	0	1	1
Floyd	4	0	0	0	4	4
Knott	2	0	0	0	2	2
Martin	4	0	0	0	4	4
Hancock	5	75	1	0	6	6
Ohio	18	330	6	0	15	15
McLean-Ohio	6	600	0	0	12	12
McLean	1	25	0	0	2	2
Daviess	0	0	0	0	9	9
Hopkins	0	0	0	0	2	2
Webster	0	0	0	0	1	1
Breckenridge	0	0	0	0	1	1
Ttl. May	69	1,224	10	0	78	78

Gas completions: Johnson County 1, Morgan 1, Floyd 4, Knott 2, Martin 4, Ohio 1. Total 13.

ILLINOIS FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Rigs	Dlg.	Ttl.
Bond	1	0	1	0	1	1
Clay	1	2,642	0	0	2	2
Clark	0	0	0	0	2	2
Christian	0	0	0	0	2	2
Effingham	0	0	0	0	1	1
Fayette	0	0	0	1	0	1
Richland	0	0	0	0	1	1
Randolph	0	0	0	0	1	1
Marion	3	100	1	2	13	15
St. Clair	0	0	0	0	1	1
Clinton	1	10	0	0	3	3
Wayne	0	0	0	0	2	2
Perry	0	0	0	0	1	1
Jefferson	0	0	0	0	1	1
Crawford	2	12	0	0	3	3
McDonough	1	15	0	0	1	1
Wabash	1	80	0	0	0	0
Lawrence	4	40	1	0	1	1
Ttl. May	14	2,899	3	3	36	39

One gas well completed in Lawrence County.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil, No. 1-22 Capitan, Santa Barbara Co.	32- 5-30	2,880	P.B. 2,836
Hancock-Bush, No. 2-B Santa Maria, Santa Barbara	25-10-34	2,160	sd. sh. drlg.
Sed Oil, No. 1 Mills, Santa Maria, Santa Barbara Co.	27-10-34	1,292	sd. sh. drlg.
Union Oil, No. 3-M Santa Maria, Santa Barbara Co.	30-10-33	3,724	sd. sh. drlg.
Union Oil, No. 1-R Santa Maria, Santa Barbara Co.	21-10-34	4,579	swabbing
Union Oil, No. 1-C Santa Maria, Santa Barbara Co.	30-10-33	1,965	sd. sh. drlg.
Union Oil, No. 19 Orcutt, Santa Barbara Co.	26- 9-34	2,897	sd. sh. drlg.
Pacific Western Oil, No. 1-H Santa Barbara Co.	21-10-34	1,943	sd. sh. drlg.
Rich Ranch Oil, No. 4 Orcutt, Santa Barbara Co.	23- 9-34	4,065	gr. sd. drlg.
Valley Oil, No. 1 Casmalia, Santa Barbara Co.	20- 9-34	2,340	bailing
101 Oil, No. 1 Pt. Concepcion, Santa Barbara Co.	35- 5-33	365	will deepen
Hancock Oil, No. 2 Los Alamos, Santa Barbara Co.	6- 7-32	1,941	sd. sh. drlg.
Arnold Oil, No. 2 Los Alamos, Santa Barbara Co.	8- 8-33	4,286	br. sh. drlg.
Field Gasoline, No. 2-C Gato Ridge, Santa Barbara	4- 8-32	2,005	sd. sh. drlg.
Petrol Corp., No. 43-A Gato Ridge, Santa Barbara Co.	9- 8-32	3,888	rig. to pump
York Oil, No. 3-A Lompoc, Santa Barbara Co.	33- 8-24	1,250	idle
Nine Springs Oil, No. 1 Los Olivos, Santa Barbara	9- 7-30	3,310	cleaning out
Oatman Mining, No. 1 Mesa, Santa Barbara Co.	28- 4-37	2,054	P.B. 2,002
Del Mar Oil, No. 1 Summerland, Santa Barbara Co.	16- 4-26	1,604	will deepen
Texas Co., No. 129 Shiells, Ventura Co.	4- 3-19	4,812	redrlg. 2,176
Texas Co., No. 132 Shiells, Ventura Co.	4- 3-19	4,127	flow. 380 b.d.
Union Oil, No. 16 Bardsdale, Ventura Co.	12- 3-20	4,769	sd. sh. drlg.
Condor Oil, No. 1 Sespe, Ventura Co.	6- 4-19	1,972	br. sh. drlg.
Ivers, H. A., No. 14 Star, Sespe, Ventura Co.	1- 4-20	1,218	sd. sh. drlg.
Topa Topa Oil, No. 2 Sespe, Ventura Co.	33- 5-19	3,652	rd. sd. drlg.
Spelk Oil, No. 2 Sespe, Ventura Co.	33- 5-19	2,565	cmtd. 2,462
Colima Oil, No. 2 Sespe, Ventura Co.	25- 5-19	2,620	rd. sd. drlg.
Pacific Western Oil, No. 8 Temescal, Ventura Co.	4- 4-18	2,907	pump. 120 b.d.
Vai, Giovani, No. 1 Ojai, Ventura Co.	3- 4-18	1,520	sd. sh. drlg.
Pacific Western Oil, No. 9 Temescal, Ventura Co.	4- 4-21	436	hd. sh. drlg.
St. Louis Oil, No. 1 Pirie, Ojai, Ventura Co.	13- 4-24	1,388	pump. 30 b.d.
Texas Co., No. 1 Saticoy, Ventura Co.	31- 3-21	2,073	sd. sh. drlg.
Continental Oil, No. 1 Red Mountain, Ventura Co.	7- 3-23	7,900	hd. sd. drlg.
Continental Oil, No. 7 San Miguelito, Ventura Co.	23- 3-24	6,252	hd. sh. drlg.
C. C. M. Oil, No. 2 Padre Canyon, Ventura Co.	23- 3-24	6,465	redrlg. 5,251
Continental Oil, No. 3 Padre anyon, Ventura Co.	15- 3-24	7,291	sd. sh. drlg.
C. C. M. Oil, No. 14 Rincon, Ventura Co.	17- 3-24	2,064	sd. sh. drlg.
C. C. M. Oil, No. 15 Rincon, Ventura Co.	17- 3-24	1,571	sd. sh. drlg.
El Rio Oil, No. 1 Oxnard, Ventura Co.	6- 1-21	3,000	cleaning out
Tide Water A. O., No. 31 V.L.W., Ventura, Ventura	24- 3-23	4,185	sd. sh. drlg.
Tide Water A. O., No. 60 Lloyd, Ventura, Ventura	27- 3-23	7,084	sd. sh. drlg.
Tide Water A. O., No. 81 Lloyd, Ventura, Ventura	27- 3-23	7,600	cleaning out
Tide Water A. O., No. 137 Lloyd, Ventura, Ventura	27- 3-23	7,835	hd. sh. drlg.
Tide Water A. O., No. 18 Hartman, Ventura, Ventura	22- 3-23	2,000	sd. sh. drlg.
Shell Oil, No. 91 Taylor, Ventura, Ventura Co.	30- 3-23	7,171	sd. sh. drlg.
Shell Oil, No. 35 Gosnell, Ventura, Ventura Co.	28- 3-23	8,950	P.B. 8,612
General Pet., No. 17 Barnard, Ventura, Ventura Co.	23- 3-23	7,774	hd. sh. drlg.
Den Pet., No. 1 Devils Den, Kern Co.	20-25-19	4,276	fishing
Texas Co., No. 11-9 Theta, Lost Hills, Kern Co.	11-26-20	2,048	P.B. 1,252
Amerada Pet., No. 1 Blackwell Corner, Kern Co.	17-26-19	2,487	hd. sh. drlg.
East Puente Oil, No. 23-11 McKittrick, Kern Co.	11-30-21	941	sd. sh. drlg.
Seaboard Oil, No. 1 Wasco, Kern Co.	26-27-24	9,315	br. sh. drlg.
Belridge Oil, No. 3-35 North Belridge, Kern Co.	35-27-20	7,851	br. sh. drlg.
Belridge Oil, No. 24-35 North Belridge, Kern Co.	35-27-20	8,690	swabbing
Belridge Oil, No. 61-26 North Belridge, Kern Co.	26-27-20	3,391	sd. sh. drlg.
Belridge Oil, No. 28-1 North Belridge, Kern Co.	1-28-20	961	sd. sh. drlg.
Continental Oil, No. 9 North Belridge, Kern Co.	36-27-20	6,771	hd. sh. drlg.
Tide Water Associated, No. 6 North Belridge, Kern	34-27-20	6,594	br. sh. drlg.
Texas Co., No. 1 Martin, North Belridge, Kern Co.	22-27-20	5,048	redrlg. 4,980
Santa Ynez Oil, No. 1 Temblor, Kern Co.	36-29-20	1,041	sd. sh. drlg.
Patton-Baldwin Oil, No. 1 Round Mountain, Kern Co.	32-28-29	1,597	sd. sh. drlg.
Honolulu Oil, No. 13 Round Mountain, Kern Co.	20-28-29	1,830	pump. 430 b.d.
Honolulu Oil, No. 21 Round Mountain, Kern Co.	20-28-29	1,885	O.S. drlg.
Link Oil, No. 1 Conry, Round Mountain, Kern Co.	30-28-29	1,577	sd. sh. drlg.
Shell Oil, No. 14 Freeman, Round Mountain, Kern Co.	20-28-29	1,936	pump. 855 b.d.
Shell Oil, No. 1 Estate, Round Mountain, Kern Co.	16-28-29	1,908	P.B. 1,888
Republic Pet., No. 2 Cal Tech, Kern Front, Kern Co.	24-28-27	175	sd. sh. drlg.
McDonald & Dearin, No. 4 Carrie, Kern Front, Kern	10-28-27	2,131	sd. sh. drlg.
Oil, Inc., No. 7-2 Kern Front, Kern Co.	13-28-27	1,289	P.B. 1,247
General Pet., No. 53 Young, Kern Front, Kern Co.	13-28-27	1,989	pump. 10 b.d.
Barnhart & Morrow, No. 4 K. C. L., Kern Front, Kern	11-28-27	1,978	rig. to pump
California Star Oil, No. 10-80 Kern Front, Kern Co.	22-27-27	612	sd. sh. drlg.
Texas Co., No. 7 Lehman, Kern Front, Kern Co.	23-28-27	2,125	recmtd. 1,790
Shell Oil, No. 1 Bellview, Kern Co.	31-29-27	3,481	sd. sh. drlg.
Superior Oil, No. 2 Bakersfield, Kern Co.	36-29-28	2,595	sd. sh. drlg.
Wilshire Oil, No. 1 F. P., Union Avenue, Kern Co.	36-29-27	5,397	sd. sh. drlg.
C. C. M. Oil, No. 1 Carter, Mount Poso, Kern Co.	7-27-27	2,641	sd. sh. drlg.
Framac Oil, No. 1 Brown, Mount Poso, Kern Co.	22-27-27	1,351	rebldg. rig
Chevalier, J. J., No. 3 S.P., Mount Poso, Kern Co.	3-27-28	1,475	cleaning out
Desert Glow Oil, No. 1 Mount Poso, Kern Co.	14-27-27	1,254	pump. 20 b.d.
Vanguard Oil, No. 7 Baker, Mount Poso, Kern Co.	33-27-28	1,770	redrlg. 1,720
General Pet., No. 7 Heisen, Mount Poso, Kern Co.	16-27-28	1,596	sd. sh. drlg.
Shell Oil, No. 19 Security, Mount Poso, Kern Co.	16-27-28	1,678	rig. to pump
Banducci, L. P., No. 2-T Fruitvale, Kern Co.	26-29-27	3,735	pump. test
Berman, A. B., No. 1 Fruitvale, Kern Co.	23-29-27	1,554	sd. sh. drlg.
Western Gulf Oil, No. 4-S.W., Fruitvale, Kern Co.	27-29-27	3,474	pump. 820 b.d.
Wilbur, V. R. G., No. 1 Fruitvale, Kern Co.	22-29-27	3,893	P.B. 3,835
Simmel, L. C., No. 1 Fruitvale, Kern Co.	23-29-27	1,897	sd. sh. drlg.
Mohawk Pet., No. 4-23 K. C. L., Fruitvale, Kern Co.	23-29-27	3,163	P.B. 3,138
Meridian Oil, No. 3-F Fruitvale, Kern Co.	23-29-27	3,134	pump. 50 b.d.
Mesa Pet., No. 1-L Fruitvale, Kern Co.	28-29-27	1,772	sd. sh. drlg.
American Expl., No. 1-G Mountain View, Kern Co.	18-30-29	4,792	fish. bit
American Expl., No. 1-C Mountain View, Kern Co.	18-30-29	3,973	sd. sh. drlg.
Savoy Oil, No. 2-W Mountain View, Kern Co.	34-30-29	4,735	fish. D.P.
Tracy Drlg., No. 1-B Mountain View, Kern Co.	19-30-29	5,165	rig. to pump
Petrol Prod., No. 1 Earl, Mountain View, Kern Co.	4-31-29	1,598	sd. sh. drlg.
Hogan Pet., No. 4 Symons, Mountain View, Kern Co.	5-31-29	6,188	swab. water
Hogan Pet., No. 3 Bankline, Mountain View, Kern Co.	5-31-29	5,648	P.B. 5,424
Greer, P. H., No. 2 Perrell, Mountain View, Kern Co.	9-31-29	5,197	sd. sh. drlg.
Mohawk Pet., No. 4 Earl, Mountain View, Kern Co.	4- 31-29	5,455	idle
Golden Bear Oil, No. 1 Edison, Mountain View, Kern	12-30-29	981	sd. sh. drlg.
Monterey Expl., No. 6 Duff, Edison, Kern Co.	15-30-29	3,605	P.B. 3,412
North American, No. 4 Brown, Edison, Kern Co.	14-30-29	1,652	pump. 115 b.d.
Berree Oil, No. 6 Seale, Edison, Kern Co.	5-30-29	642	sd. sh. drlg.
Bacal Oil, No. 1 Brown, Edison, Kern Co.	5-30-30	1,554	sd. sh. drlg.
Cajalco Pet., No. 1 Brown, Edison, Kern Co.	9-30-30	2,731	sd. sh. drlg.
Metro Oil, No. 2 Edison, Kern Co.	6-30-29	2,593	will P.B.
East Edison Oil, No. 2 Edison, Kern Co.	23-30-30	1,376	sd. sh. drlg.
Arkelo Oil, No. 1 Lerdo, Kern Co.	23-28-26	10,050	fish. D.P.
Union Oil, No. 1-34 Rio Bravo, Kern Co.	34-28-25	8,925	br. sh. drlg.
Continental Oil, No. 1 Rosedale, Kern Co.	12-29-26	9,175	hd. sd. drlg.
Standard Oil, No. 11-2 KCL, Greeley, Kern Co.	20-29-26	8,339	P.B. 7,682
Standard Oil, No. 11-4 KCL, Greeley, Kern Co.	20-29-26	7,250	sd. sh. drlg.
Standard Oil, No. 11-5 KCL, Greeley, Kern Co.	20-29-26	7,773	sd. sh. drlg.
Standard Oil, No. 11-6 KCL, Greeley, Kern Co.	20-29-26	2,972	sd. sh. drlg.
Standard Oil, No. 12-1 KCL, Greeley, Kern Co.	30-29-26	8,175	sd. sh. drlg.
Union Oil, No. 4 San Emidio, Kern Co.	31-11-22	410	br. sh. drlg.
Shell Oil, No. 21-14 Old River, Kern Co.	14-30-25	8,615	sd. sh. drlg.
Shell Oil, No. 58-29 Ten Section, Kern Co.	29-30-26	7,932	br. sh. drlg.
Ohio Oil, No. 2-E Ten Section, Kern Co.	6-30-26	8,100	sd. sh. drlg.
C. C. M. Oil, No. 32-21 Midway-Sunset, Kern Co.	21-32-23	530	sd. sh. drlg.
Pattiway Oil, No. 2 Midway-Sunset, Kern Co.	12-11-24	1,484	cmtd. 1,275
B-Zone Oil, No. 1 Midway-Sunset, Kern Co.	22-32-23	4,406	idle
Signal Oil, No. 5-W Midway-Sunset, Kern Co.	8-11-23	2,755	O.S. drlg.
Colby, L. W., No. 1 Midway-Sunset, Kern Co.	12-11-24	1,500	idle
Ethel D Oil, No. 43 Midway-Sunset, Kern Co.	36-12-24	975	sd. sh. drlg.
Standard Oil, No. 47-33-D Midway-Sunset, Kern Co.	33-32-24	3,060	pump. 517 b.d.
Standard Oil, No. 51-33-D Midway-Sunset, Kern Co.	33-32-24	2,835	sd. sh. drlg.
Standard Oil, No. 93-33-D Midway-Sunset, Kern Co.	33-32-24	2,855	sd. sh. drlg.
Oil Producers, Inc., No. 2 Midway-Sunset, Kern Co.	7-11-23	2,727	sd. sh. drlg.
Tide Water A. O., No. 5-P.C., Midway-Sunset, Kern Co.	32-31-23	3,450	sd. sh. drlg.
Merritt-Annex Oil, No. 5 Fried, Midway-Sunset, Kern	25-12-24	1,760	sd. sh. drlg.
Valley Oil, No. 1 Midway-Sunset, Kern Co.	18-32-23	3,172	P.B. 2,780
Texas Co., No. 22 Midway-Sunset, Kern Co.	32-32-24	3,102	rig. to pump
U. S. Pumping Equip., No. 5 Midway-Sunset, Kern Co.	12-11-24	1,665	sd. sh. drlg.
General Pet., No. 49-B Midway-Sunset, Kern Co.	24-31-23	4,495	idle
Quality Oil, No. 5-C Midway-Sunset, Kern Co.	22-32-23	2,110	pump. 245 b.d.
Quality Oil, No. 2 W.P., Midway-Sunset, Kern Co.	27-32-23	2,187	rig. to pump
Hoyt, Otis, No. 1 Midway-Sunset, Kern Co.	7-11-23	1,832	rig. to pump

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Richfield Oil, No. 7-H Crampton, Elk Hills, Kern Co.	1-31-24	3,065	pump. 205 b.d.
Richfield Oil, No. 13-D Crampton, Elk Hills, Kern Co.	1-31-24	276	sd. sh. drlg.
Reserve Oil & Gas, No. 33-4 Tejon, Kern Co.	33-11-19	4,570	test. W.S.O.
Hall-Baker, No. 11 Tejon, Kern Co.	14-10-19	1,797	sd. sh. drlg.
Wilshire Oil, No. 1 Tejon, Kern Co.	5-10-19	5,841	sd. sh. drlg.
Ohio Oil, No. 2 Tejon, Kern Co.	21-11-19	8,975	br. sh. drlg.
K. N. D. A., No. 4-18-J Kettleman North, Fresno Co.	18-21-17	10,700	hd. sh. drlg.
K. N. D. A., No. 67-28-J Kettleman North, Fresno Co.	28-21-17	7,096	sd. sh. drlg.
K. N. D. A., No. 78-28-J Kettleman North, Fresno Co.	28-21-17	8,140	sd. sh. drlg.
K. N. D. A., No. 2-34-J Kettleman North, Fresno Co.	34-21-17	7,350	gr. sd. drlg.
K. N. D. A., No. 32-34-J Kettleman North, Fresno Co.	34-21-17	7,496	gr. sd. drlg.
K. N. D. A., No. 41-4-P Kettleman North, Fresno Co.	4-22-17	3,462	sd. sh. drlg.
K. N. D. A., No. 61-4-P Kettleman North, Fresno Co.	4-22-17	8,060	sd. sh. drlg.
Standard Oil, No. 27-33-J Kettleman North, Fresno Co.	33-21-17	160	sd. sh. drlg.
Standard Oil, No. 41-33-J Kettleman North, Fresno Co.	33-21-17	6,030	sd. sh. drlg.
Standard Oil, No. 81-33-J Kettleman North, Fresno Co.	33-21-17	8,047	cmtd. 8,042
Standard Oil, No. 4-3-P Kettleman North, Fresno Co.	3-22-17	6,062	sd. sh. drlg.
Standard Oil, No. 78-2-P Kettleman North, Kings Co.	3-22-17	8,005	sd. sh. drlg.
Temblor Oil, No. 1-B Kettleman Middle, Kings Co.	25-23-18	5,965	sd. sh. drlg.
Bisconer, R., No. 1 Cloud, Kings Co.	11-24-20	1,050	sd. sh. drlg.
Birch-Royer Oil, No. 1 Orr, Kings Co.	5-23-17	498	sd. sh. drlg.
Clare, A. S., No. 1 Corcoran, Kings Co.	30-20-22	992	cleaning out
Temblor Oil, No. 1 Panorama, San Luis Obispo Co.	22-32-21	1,715	reaming
Lewis, A. O., No. 1 Pecho, San Luis Obispo Co.	34-30-10	2,774	reaming
Shell Oil, No. 1 Pleyto, Monterey Co.	34-24-10	8,994	cleaning out
Anderson, Amil, No. 1 Cholame, Monterey Co.	15-24-14	1,060	sd. sh. drlg.
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	7,708	fish. bit
Amerada Pet., No. 2 Marks, Rio Vista, Solano Co.	22- 4-2	4,475	no test
Amerada Pet., No. 1 Triqueiro, Rio Vista, Solano Co.	24- 4-2	612	sd. sh. drlg.
Tide Water A. O., No. 1 Sargent, San Benit Co.	5-12-4	6,921	P.B. 4,639
Buttes Oilfield, Ltd., No. 1 Kent, Sutter Co.	2-15-1	5,810	fish. D.P.
Jennings, E. P., No. 1 Allensworth, Tulare Co.	4-24-23	2,709	cleaning out
Standard Oil, No. 1 Middle River, San Joaquin Co.	24- 1-5	4,930	sd. sh. drlg.
Coast Expl. Co., Well No. 1, Stanislaus Co.	30- 4-9	3,550	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Richfield Oil, No. 6 El Segundo, Los Angeles Co.	18- 3-14	2,874	sd. sh. drlg.
Richfield Oil, No. 1 Elsie, El Segundo, Los Angeles Co.	12- 3-15	3,890	sd. sh. drlg.
Ohio Oil, No. 4 El Segundo, Los Angeles Co.	7- 3-14	6,075	sd. sh. drlg.
Ohio Oil, No. 5 El Segundo, Los Angeles Co.	7- 3-14	6,498	sd. sh. drlg.
Texas Co., No. 2 Security, El Segundo, Los Angeles	18- 3-14	7,263	cleaning out
Standard Oil, No. 1 Refy, El Segundo, Los Angeles Co.	13- 3-15	7,171	cmtd. 7,054
Republic Pet., No. 8 El Segundo, Los Angeles Co.	18- 3-14	7,408	rig. to pump
Douglas Oil, No. 9 Lawndale, Los Angeles Co.	20- 3-14	6,365	deep test
Calizoo Oil, No. 1 S.L.A., Los Angeles Co.	16- 3-13	6,065	hd. sd. drlg.
Weber-Butler Oil, No. 2 Torrance, Los Angeles Co.	16- 4-14	4,528	completing
Calmore Oil, No. 1 C.O.C., Torrance, Los Angeles Co	6- 4-14	2,972	sd. sh. drlg.
C. C. M. Oil, No. 34-T Torrance, Los Angeles Co.	16- 4-14	4,130	br. sh. drlg.
McLaren & Assoc., No. 1 Palos Verdes, Los Angeles	27- 4-14	3,992	cleaning out
K. & I. Corp., No. 25 Rubel, Inglewood, Los Angeles	8- 2-14	1,392	sd. sh. drlg.
Shell Oil, No. 90 Reyes, Dominguez, Los Angeles Co.	33- 3-13	9,598	cleaning out
Shell Oil, No. 91 Reyes, Dominguez, Los Angeles Co.	33- 3-13	981	cmtd. 976
Union Oil, No. 50 Callender, Dominguez, Los Angeles	33- 3-13	10,435	cleaning out
Union Oil, No. 54 Callender, Dominguez, Los Angeles	33- 3-13	2,931	sd. sh. drlg.
Union Oil, No. 55 Callender, Dominguez, Los Angeles	33- 3-13	5,795	sd. sh. drlg.
Union Oil, No. 47 Hellman, Dominguez, Los Angeles	33- 3-13	3,860	sd. sh. drlg.
Barnsdall Oil, No. 16 O'Dea, Rosecrans, Los Angeles	18- 3-13	2,744	sd. sh. drlg.
Union Oil, No. 16 Rosecrans, Los Angeles Co.	18- 3-13	7,570	sd. sh. drlg.
Macrate, A. N., No. 2 Rosecrans, Los Angeles Co.	17- 3-13	3,630	sd. sh. drlg.
Universal Consd., No. 1-T Rosecrans, Los Angeles Co.	18- 3-13	5,830	sd. sh. drlg.
Bolsa Chica Oil, No. 1 Rosecrans, Los Angeles Co.	20- 3-13	6,552	sd. sh. drlg.
Union Oil, No. 18 D.R., Playa Del Rey, Los Angeles	27- 2-15	5,868	sd. sh. drlg.
Burt, A. G., No. 1 Newhall, Los Angeles Co.	36- 4-17	1,675	sd. sh. drlg.
Holbrook Pet., No. 1 Newhall, Los Angeles Co.	28- 4-16	5,390	P.B. 4,860
General Pet., No. 3 Ford, Wilmington, Los Angeles	4- 5-13	5,355	P.B. 5,050
General Pet., No. 6 Ford, Wilmington, Los Angeles	4- 5-13	3,905	flow. 1,920 b.d
General Pet., No. 9 Ford, Wilmington, Los Angeles	4- 5-13	2,960	sd. sh. drlg.
General Pet., No. 10 Ford, Wilmington, Los Angeles	4- 5-13	1,820	sd. sh. drlg.
General Pet., No. 11 Ford, Wilmington, Los Angeles	4- 5-13	2,931	sd. sh. drlg.
General Pet., No. 2 Isco, Wilmington, Los Angeles	4- 5-13	2,500	sd. sh. drlg.
Bankline Oil, No. 2-C.Y., Wilmington, Los Angeles	33- 4-13	2,976	sd. sh. drlg.
Bankline Oil, No. 7-P.T., Wilmington, Los Angeles	33- 4-13	1,921	sd. sh. drlg.
Burnoel Oil, No. 1-E Wilmington, Los Angeles Co.	33- 4-13	172	sd. sh. drlg.
Black Gold Oil, No. 3 Wilmington, Los Angeles Co.	32- 4-13	1,964	sd. sh. drlg.
Alford Dev., No. 2 Wilmington, Los Angeles Co.	33- 4-13	3,740	pump. 65 b.d.
Graham-Loftus Oil, No. 1-P Wilmington, Los Angeles	33- 4-13	3,108	sd. sh. drlg.
Hall, Inc., No. 15-7 Wilmington, Los Angeles Co.	32- 4-13	3,650	sd. sh. drlg.
Hall, Inc., No. 484-1 Wilmington, Los Angeles Co.	33- 4-13	3,324	flow. 310 b.d.
Hughes, W., No. 1 Wilmington, Los Angeles Co.	33- 4-13	1,971	sd. sh. drlg.
Jergins Trust, No. 2 Wilmington, Los Angeles Co.	34- 4-13	3,469	recmtd. 3,042
Jergins Trust, No. 6 Wilmington, Los Angeles Co.	34- 4-13	3,251	sd. sh. drlg.
Jergins Trust, No. 12 Wilmington, Los Angeles Co.	34- 4-13	3,483	sd. sh. drlg.
Las Vegas L. & W., No. 1 Wilmington, Los Angeles	4- 5-13	2,151	sd. sh. drlg.
Leal, G. V., No. 2 Wilmington, Los Angeles Co.	5- 5-13	1,976	sd. sh. drlg.
Macmillan Pet., No. 2-H Wilmington, Los Angeles Co.	33- 4-13	2,283	sd. sh. drlg.
Olympic Ref., No. 2 fee, Wilmington, Los Angeles	33- 4-13	3,287	sd. sh. drlg.
Premier Pet., No. 5 Selegna, Wilmington, L. Angeles	33- 4-13	2,171	sd. sh. drlg.
Pac. Western, No. 1 Thiele, Wilmington, Los Angeles	33- 4-13	1,541	sd. sh. drlg.
Pac. Western, No. 1 Petsec, Wilmington, Los Angeles	33- 4-13	3,430	flow. 180 b.d.
Pac. Western, No. 1 Rush, Wilmington, Los Angeles	33- 4-13	2,573	sd. sh. drlg.
Pongratz Oil, No. 2 Ronan, Wilmington, Los Angeles	33- 4-13	3,577	flow. 215 b.d.
Ring Oil, No. 4 Wilmington, Los Angeles Co.	33- 4-13	3,609	flow. 780 b.d.
Royalty Service, No. 1-A-SF Wilmington, Los Angeles	33- 4-13	1,163	sd. sh. drlg.
Royalty Service, No. 1-B-SF Wilmington, Los Angeles	33- 4-13	3,615	flow. 572 b.d.
Royalty Service, No. 1-B-N Wilmington, Los Angeles	33- 4-13	3,315	flow. 240 b.d.
Royalty Service, No. 2-B-N Wilmington, Los Angeles	33- 4-13	2,953	sd. sh. drlg.
Royalty Service, No. 5-B-N Wilmington, Los Angeles	33- 4-13	2,891	sd. sh. drlg.
Royalty Service, No. 6-B-N Wilmington, Los Angeles	33- 4-13	982	sd. sh. drlg.
Royalty Service, No. 469-1 Wilmington, Los Angeles	33- 4-13	3,350	flow. 295 b.d.
Sovereign Oil, No. 4 Wilmington, Los Angeles Co.	33- 4-13	3,311	sd. sh. drlg.
Union Pacific, No. 12 Wilmington, Los Angeles Co.	4- 5-13	3,898	flow. 2,048 b.d.
Union Pacific, No. 13 Wilmington, Los Angeles Co.	4- 5-13	3,904	P.B. 3,840
Union Pacific, No. 16 Wilmington, Los Angeles Co.	34- 4-13	2,774	sd. sh. drlg.
Union Pacific, No. 23 Wilmington, Los Angeles Co.	4- 5-13	1,543	sd. sh. drlg.
Union Pacific, No. 24 Wilmington, Los Angeles Co.	4- 5-13	3,513	flow. 370 b.d.
Union Pacific, No. 25 Wilmington, Los Angeles Co.	33- 4-13	1,974	sd. sh. drlg.
Union Pacific, No. 26 Wilmington, Los Angeles Co.	33- 4-13	2,985	sd. sh. drlg.
Union Pacific, No. 30 Wilmington, Los Angeles Co.	33- 4-13	3,145	sd. sh. drlg.
Union Pacific, No. 34 Wilmington, Los Angeles Co.	3- 5-13	2,590	sd. sh. drlg.
Union Pacific, No. 1-C Wilmington, Los Angeles Co.	33- 4-13	1,981	sd. sh. drlg.
Sunset Oil, No. 1 Manhattan, Los Angeles Co.	19- 3-14	5,741	resume work
Julian, C. A., No. 1 Koch, Walnut, Los Angeles Co.	5- 2-9	1,793	redrig. 1,751
Richfield Oil, No. 2 Ciocca, Montebello, Los Angeles	5- 2-11	4,294	sd. sh. drlg.
Richfield Oil, No. 1 Estrada, Montebello, Los Angeles	5- 2-11	5,670	sd. sh. drlg.
Texas Co., No. 17 Baldwin, Montebello, Los Angeles	6- 2-11	5,796	sd. sh. drlg.
Universal Consd., No. 1-F Montebello, Los Angeles	5- 2-11	5,712	reaming
Texas Co., No. 21-F Long Beach, Los Angeles Co.	19- 4-12	4,750	bailing
Texas Co., No. 3 Flower, Long Beach, Los Angeles	19- 4-12	2,960	sd. sh. drlg.
Mitchell, A. D., No. 3 Plymouth, L. Beach, L. Angeles	19- 4-12	3,240	sd. sh. drlg.
Shell Oil, No. 14 Cressen, Long Beach, Los Angeles	19- 4-12	601	sd. sh. drlg.
Jergins Trust, No. 29-M Long Beach, Los Angeles Co.	19- 4-12	3,005	rig. to pump
Richfield Oil, No. 5 Frye, Long Beach, Los Angeles	19- 4-12	3,310	sd. sh. drlg.
Coastal Oil & Gas, No. 1 Signal, L. Beach, L. Angeles	19- 4-12	1,754	sd. sh. drlg.
General Pet., No. 27 Santa Fe Springs, Los Angeles	5- 3-11	4,796	fish. D.P.
Union Oil, No. 100 Santa Fe Springs, Los Angeles Co.	6- 3-11	10,789	fish. D.P.
Wales Pet., No. 1-H Monterey Park, Los Angeles Co.	26- 1-12	1,330	sd. sh. drlg.
Standard Oil, No. 28 S.C., Seal Beach, Orange Co.	11- 5-12	6,530	bailing
Tide Water A. O., No. 16-B Seal Beach, Orange Co.	11- 5-12	4,863	sd. sh. drlg.
Lucky Strike Oil, No. 8 Huntington, Orange Co.	2- 6-11	2,630	redrig. 2,350
Texas Co., No. 9 Brown, Huntington, Orange Co.	11- 6-11	3,832	pump. 265 b.d.
Tide Water A. O., No. 55 M. K., Huntington, Orange	2- 6-11	3,615	P.B. 3,597
West American, No. 14 Huntington, Orange Co.	34- 5-11	4,721	O.S. drlg.
W. P. R. Oil, No. 3 Huntington, Orange Co.	35- 5-11	3,960	sd. sh. drlg.
Orco Oil, No. 5 Huntington, Orange Co.	2- 6-11	4,697	redrig. 4,351
Standard Oil, No. 14 Thomson, Huntington, Orange	12- 6-11	3,701	O.S. drlg.
Union Oil, No. 9-C Huntington, Orange Co.	34- 5-11	4,138	gas well
Commander Oil, No. 1 Newport, Orange Co.	29- 6-10	7,905	fish. D.P.
Shell Oil, No. 4-1 Columbia, Olinda, Orange Co.	9- 3-9	2,806	sd. sh. drlg.
Cox, M. A., No. 1 East Coyote, Orange Co.	15- 3-10	5,450	C.P. 3,180
Bartholomae Oil, No. 4 East Coyote, Orange Co.	22- 3-10	4,997	sd. sh. drlg.
Dolicia Oil, No. 3 A.U.W., East Coyote, Orange Co.	24- 3-10	182	sd. sh. drlg.
Kelly, Thomas, No. 11 East Coyote, Orange Co.	24- 3-10	3,725	wash. acid
Union Oil, No. 20 Hole, East Coyote, Orange Co.	22- 3-10	5,371	fish. D.P.
Standard Oil, No. 2-10 East Coyote, Orange Co.	22- 3-10	4,800	sd. sh. drlg.
Standard Oil, No. 2-25 Kraemer, Richfield, Orange Co.	29- 3-9	3,929	sd. sh. drlg.
Arrowhead Oil, No. 1-B Richfield, Orange Co.	29- 3-9	3,435	sd. sh. drlg.
Bachman Pet., No. 1-K Richfield, Orange Co.	29- 3-9	4,625	sd. sh. drlg.
Joseph, Arthur, No. 1 Richfield, Orange Co.	29- 3-9	3,740	P.B. 3,660
Union Oil, No. 10 Morse, Richfield, Orange Co.	29- 3-9	3,280	sd. sh. drlg.
Union Oil, No. 9 Coyle, Richfield, Orange Co.	29- 3-9	3,402	pump. 110 b.d.
Union Oil, No. 14 Stern, Richfield, Orange Co.	33- 3-9	971	sd. sh. drlg.
Principal Oil, No. 1 Richfield, Orange Co.	36- 3-9	2,728	idle
Richfield Consd. Oil, No. 1 Yorba, Orange Co.	22- 3-9	1,560	sd. sh. drlg.
Signet Oil Co., No. 1 Yorba, Orange Co.	21- 3-9	1,797	sd. sh. drlg.
West American Oil, No. 1 Tustin, Orange Co.	14- 5-9	4,364	hd. sd. drlg.

KANSAS

Week Ending June 19 (Descriptions are East unless marked otherwise)

Barber County

Barbara Oil Co. No. 1-27 Holmes, C NW NW sec. 27-33-13w. Drlg. 4,210 ft.

Pryor & Lockhart No. 1 Gant, C SE sec. 7-31-13w. Viola 4,435 ft.; set 7-in. 4,-428 ft.; R.U.S.T.

W. I. Southern, Inc., No. 1 Davis, SE SE NE sec. 24-34-15w. Fsg. 866 ft.

Barton County

S. E. Bailey No. 1 Hammeke, NE NE SW sec. 12-18-12w. Drlg. 2,810 ft.

J. B. Hanna No. 1 Luce, SW cor. sec. 21- 20-13w. R.U.R.

Sam Murphy No. 1 Beck, NE cor. sec. 17-17-12w. Spud and S.D.

Republic Nat. Gas Co. and Continental Oil Co. No. 1 Moeder, NE NE SW sec. 25-17-13w. Fsg. 2,785 ft.

Shell Pet Corp. No. 1 Schneider, CNL S½ SE sec. 12-16-14w. Topeka 2,784 ft.; drlg. 2,905 ft.

Stanolind No. 1 Schartz, NW cor. sec. 33-19-11w. Set 10-in. 203 ft.; W.O.C.

Stanolind O. & G. Co. No. 1 Struder, SE SE SW sec. 26-16-13w. Sil. 3,402-12 ft.; T.D.; P. 675 B.O. in 24 hrs.; comp.

Butler County

Kahn et al No. 1-A Madden, SW SW NE sec. 27-23-4. K.C. 2,065 ft.; T.D. 2,212 ft.; pot. 30 B.O. with 60 B.W.

Simpson Oil Co. et al No. 1-A Dennis, NE NE SW sec. 15-26-6. Drlg. 1,510 ft.

Maurer & Saco Oil Co. No. 1 Connell, NE NE SW sec. 27-29-5e. Drlg. 875 ft.

Chautauqua County

C. L. Brosius et al No. 1 Garrett, NW SW NW sec. 26-32-11. Drlg. 610 ft.

Buffington and Cohen No. 1-A Hayes, SE NE SE sec. 10-33-13. Miss. 1,525 ft.; S.O. 1,630 ft.; drlg. 1,786 ft.

Robinson et al, No. 1 Foster, SW cor. sec. 6-33-12. T.D. 1,732 ft.; 4 B.O. per dav.

Cowley County

B. B. Blair et al No. 1 Miller, NE NW SW sec. 14-32-5. Drlg. 2,175 ft.

Murta & Wilson No. 1 Turner, NE NE NW sec. 30-32-6. T.D. 2,247 ft.; P.&F. 509 B.O. and 20 B.W.; comp.

McCoy et al No. 1 Anderson, SE NW NE sec. 34-34-6. Drlg. 2,255 ft.

Palmer et al No. 1 Ogrosky, SE SE NW sec. 31-32-5. Drlg. 2,505 ft.

Trees Oil Co. No. 1 Hornbeck, NW cor. sec. 5-33-4. Drlg. 1,235 ft.

Tulsa Oil Co. et al No. 1 Dillon, NW NW NE sec. 28-34-3. Layton 2,623-2,800 ft.; drlg. 2,850 ft.

Elk County

G. T. Berry No. 1 Zimmerman, SW NE SE sec. 15-30-10. Miss. L. 2,001 ft.; drlg. 2,031 ft.; 1,100 ft. W.I.H. and S.S.O.; T.D. 2,031 ft.

Republic Nat. Gas Co. No. 1 Glasscock, SE NE SW sec. 19-31-11. Set 8-in. csg. 1,-470 ft.; W.O.C.

Ellis County

Austin Drlg. Co. No. 1 Karlin, NW cor. sec. 13-12-18w. R.U.

Billings No. 1 Smith, SE SE NW sec. 14- 12-16w. K.C. L. 3,083 ft.; O.&W.I.H. 3,-193-94 ft.; swbd. down; no refill; setg. 5-in. 3,305 ft.

J. J. Muth No. 1 Penney, NW SE SE sec. 29-14-18w. S.D. 315 ft.

Earl Wakefield et al No. 1 Burnett, NW NW NE sec. 1-11-18w. Drlg. 1,050 ft.

Ellsworth County

Orville Lea No. 1 Larkin, NW cor. sec. 15-16-8w. H.F.W. 3,065-73 ft.; T.D. 3,-080 ft.; D.&A.

Greenwood County

Ward McGinnis et al No. 1 Henly Estate. SW cor. sec. 25-25-9. Set 5-in. csg.; T.D. 2,171 ft.; acd.

Western Kansas O. & R. Co. No. 1 Taylor, SE SE SW sec. 6-27-12. S.D. 385 ft.

Hamilton County

Denver Prod. & Ref. Co. No. 1 Porter. SW SW NE sec. 30-25-41w. Drlg. 4,-187 ft.

Harvey County

Hollow & Bradley Bros. No. 1 Neufeldt, NE SE NW sec. 7-22-1w. Sil. 3,589-3,-608 ft., T.D.; D.&A.

Simpson & Noble et al No. 1 Pierce, SW SE NE sec. 25-22-2w. Drlg. 2,280 ft.

Kearny County

J. L. Murphy No. 1 Masonic Home, C NW sec. 1-26-36w. T.D. 519 ft.; fsg.

McPherson County

C. E. Ash Drilling Co. No. 1 Broman, NE NE NW sec. 19-17-4w. Rig.

Bradley Bros. No. 1 Barnholt, SW SW SE sec. 30-30-5w. H.F.W. 3,063 ft.; drlg. 3,110 ft.

Fred C. Frank et al No. 1 Doles, SE NW NE sec. 12-19-1w. C.O. 1,403 ft.

Tom Palmer et al No. 1 Regier, SE NE NW sec. 13-21s-1w. Chat 2,978 ft.; drlg. 3,180 ft.

Smith et al No. 1 Larson, NW NW SW sec. 35-18-5w. H.F.W. 2,725-52 ft.; U.R. 8-in. to 2,896 ft.

Wamhoff et al No. 1 Nuse, SE NE SW sec. 18-18-4w. S.D. 672 ft.

Mitchell County

Geo. Siedhoff et al No. 1 Greiss, SW SW SE sec. 16-8-10w. U.R. 6-in. csg. to 3,-410 ft.

Ness County

Jones & Lane No. 1 Page Milling Co., SE SE NW sec. 36-18-26w. R.U.

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Set 6-in. 4,333 ft.; T.D. 4,381 ft.; filled 3,383 ft. with 44-grav. oil; swbd. 50 bbls. in 2 hrs.; set 6-in. csg.; W.O.C.

Pawnee County

Simpson Oil Co. No. 1 Hewson, SE SE SW sec. 13-21-17w. Anhy. 1,035 ft.; drlg. 2,325 ft.

Pratt County

Atlantic Ref. Co. et al No. 1 Runyon, SW NW NE sec. 11-27-13w. K.C. 3,735 ft.; cd. 3,922-29 ft., T.D.; R.U.S.T.

Reno County

Carter Oil Co. et al No. 1 Bontrager, C E½ NE NE sec. 26-24-5w. Drlg. 730 ft.

Imo O. & G. Co. and others No. 1 Watkins, SE cor. sec. 14-22-7w. Drlg. 1,700 ft.

Rice County

Bell O. & G. Co. et al No. 1 Wilkins, NW NW NE sec. 23-21-9w. Drlg. 1,700 ft.

Comanche Oil Co. No. 1 Cramm, SW SW SE sec. 15-19-9w. Pay 2,946-47 ft.; 1,-800 ft. O.I.H. 1¾ hrs.; shut in; F. 67 B.O. 40 min.; quit flwg.

L. E. Douglass No. 1 Coyne, NE SE SE sec. 24-21-8w. Sil. 3,763-68 ft.; D.&A.

Gillispie et al No. 1 Strong, NE NE NW sec. 9-18s-8w. Rig.

John Hanna et al No. 1 Fulton, NW NW NE sec. 24-10-6w. H.F.W. 3,995-4,002 ft., T.D.; D.&A.

John Hanna et al No. 1 Marshall, NE NW NW sec. 30-18s-8w. R.U.

Hipple et al No. 1 Wernet, NE NE NW sec. 11-20-6w. H.F.W. 2,805-45 ft.; drlg. 2,875 ft.

H. V. Holland et al No. 1 Brothers, SE cor. sec. 12-21-7w. Spd.
Fred Phillips et al No. 1 Hubenett, SW NW SW sec. 23-20-6w. Chat 3,334 ft.; T.D. 3,366 ft.; swb. 150 B.O. in 6 hrs.
C. E. W. Skiles et al No. 1 Helmer, NW NW NE sec. 7-19-18w. U.R. 8-in. 2,815 ft.
Stanolind O. & G. Co. No. 1 Mooney, NE NE SW sec. 5-19-10w. Sil. 3,408 ft.; T.D. 3,470 ft.; D.&A.
Union Oil & Refining Co. et al No. 1 Baker, SW SW NE sec. 33-20-6w. Viola 3,660 ft.; drlg. 3,740 ft.
W. E. Witt et al No. 1 Fair, NW SE SE sec. 4-22-8w. S.D. 2,250 ft.

Rooks County

Basin Oil Co. No. 1 Baxa, NE cor. sec. 23-9-17w. S.D. 3,630 ft.
Brunson Drlg. Co. et al No. 1 Casey, SE SE NE sec. 22-9s-16w. K.C. L. 3,247 ft.; S.O. 3,292-3,305 ft.; 1 B.W. 3,355-60 ft.; drlg. 3,480 ft.
C. R. Craft et al No. 1 Ziegler, NE NE SW sec. 8-10-16w. Topeka 2,850-60 ft.; R.U. S.T.
Graham et al No. 1 Fike, SW cor. sec. 9-9-17w. S.D. 3,326 ft.
S. C. Hoel et al No. 1 Ives, SW SW NE sec. 11-7-18w. C.O. 2,325 ft.
J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. Fsg. 3,818 ft.

Rush County

Carter Oil Co. et al No. 1 Brosch, C N½ N½ SE sec. 21-18-16w. G.W. 3,611 ft.; Gran. 3,612-14 ft.
Crawford et al No. 1 Jones, NW cor. sec. 35-17-16w. Rig.
Duwe & Brouk No. 1 Lebsack, SE SE NE sec. 13-16-16w. Topeka 2,877 ft.; drlg. 2,930 ft.
S. A. Murphy et al No. 1 Roth, NW NW SW sec. 21-16-18w. Set 7-in. 2,668 ft.; C.O. 2,695 ft.
Westgate-Greenland Oil Co. et al No. 1 Greenwalt, NW NW NE sec. 19-19-16w. Drlg. 3,991 ft.; 2,500 ft. W.I.H.

Russell County

Aylward et al No. 1 Jones SE SE NW sec. 23-14-13w. Set 5-in. 3,180 ft.; H.F.W. 3,230 ft.
Billings et al No. 1 Boxberger, NE NE SE sec. 21-14-14w. Anhy. 845 ft.; drlg. 2,585 ft.
Boyle & Grossman No. 1 Deines, SE SE SW sec. 36-15-15w. Sil. 3,451 ft.; H.F.W. 3,471-76 ft.; T.D. 3,179 ft.
Boyle & Grossman No. 1 Steinert Est., NE SE NW sec. 34-15-15w. Drlg. 2,820 ft.
S. A. Murphy et al No. 1 Deines, SE SE SW sec. 36-15-15w. U.R. 6-in. csg. to 3,164 ft.; H.F.W. 3,471-76 ft.; T.D. 3,479 ft.; D.&A.
Winkler & Koch No. 1 Jones, SE SE NW sec. 22-14-13w. Sil. 3,180 ft.; S.D.O.

Scott County

Olson Drlg. Co. et al No. 1 Nolan, NW NW NE sec. 13-19-33w. K.C. L. 4,106 ft.; fsg. 4,792 ft.

Sedgwick County

Roxana Drlg. Co. et al No. 1 Woodman, SW NW SW sec. 26-26-1w. S.D. 2,469 ft.
Ryan Cons. Co. et al No. 1 Williams, NW NW SE sec. 17-25-2w. Drlg. 655 ft.
E. B. Shawver No. 1 Furman, SW NE SE sec. 24-29-3w. Drlg. 3,200 ft.

Stafford County

Atlantic Ref. Co. No. 1 Kachelman, SE NW NW sec. 13-25-14w. K.C. 3,710 ft.; drlg. 3,915 ft.
Rose Spring Drlg. Co. et al No. 1 Gray, NW cor. sec. 11-24-13w. Drlg. 2,890 ft.

Sumner County

John Burton et al No. 1 Springate, NE NE SW sec. 30-33-2e. S.D. 91 ft.
Faulkner et al No. 1 Nevitt, NE NW NE sec. 36-32-2e. P.B. 3,570 ft. to 2,782 ft.; pmpd. wtr. 12 hrs.
Glimac Oil Co. et al No. 1 Proud, SW SE SE sec. 33-30-1w. Fsg. 3,698 ft.
Graham et al No. 1 Dawson, NW NW NW sec. 4-33-2w. Base Miss. 4,250 ft.; S.D. 4,255 ft.
Texas Co. No. 1 Harper, NE SW SE sec. 9-20-3w. Sil. 4,369 ft.; 6-in. csg. 4,381 ft.; T.D. 4,390 ft.; 2,000 ft. W.I.H.; P.B. to 3,898 ft.; acd.; swb. 8 B.O.

Trego County

W. I. Southern, Inc., No. 1 Latimer, NW NW SE sec. 19-15-22w. Set 7-in. 3,979 ft.; C.O.
Turner et al No. 1 Rogers, C SW sec. 3-15-23w. R.U.R.

Woodson County

M. B. Allen No. 1 Flack, NE NE NW sec. 1-26-14. Sd. 1,313-42 ft.; T.D. 2,300,000 ft. gas.
B. & B. Oil Co. No. 1 Lockard, NW NW NE sec. 2-26-13e. Machine.
Morris et al No. 1 Koening, SE SE NW sec. 35-24-15. Drlg. 700 ft.
Fred Rapp No. 1 Houghland, NW NW SE sec. 2-25-15. Drlg. 400 ft.
W. A. Delaney et al No. 1 Payton, NE NE SE sec. 1-4-7. O.W.D.D.; R.U.R.
Mid-Continent Pet. Corp. No. 1 Schoup, SW NW SW sec. 24-5-6. Mayes 2,340 ft.; Wd. 2,605 ft.; drlg. 2,661 ft.
Norbla Oil Co. No. 1 Kennedy, SE SE NE sec. 13-2-5. S.S.O. 475-78 ft.; drlg. 800 ft.
Papoose Oil Co. et al No. 1 Jones, NW SE NW sec. 2-4-5. Viola 2,595 ft.; T.D. 2,840 ft.; run Schlumberger; S.D.O.
Roodhouse et al No. 1 Booth, SE NW SE sec. 20-2-6. Sylvan 4,389 ft.; Viola 4,530 ft.; drlg. 4,695 ft.
Southern Oil Co. No. 1 Young, NE NE SE sec. 17-3-7. S.D. for repairs; T.D. 470 ft.; C.O. 440 ft.
Summit Drlg. Co. et al No. 1 Whittaker, NW NE SE sec. 31-4-6. Wilcox 3,576 ft.; S.D. 3,754 ft.; Oil Creek 3,645 ft.; T.D. 3,754 ft.; D.&A.
Union Dev. Co. No. 1 Abbott, SW NW NE sec. 34-3-6. T.D. 320 ft.; S.D.

Pottawatomie County

Atlantic Ref. Co. No. 1 Doolev, SE SE SW sec. 9-11-5. Earlsboro 3,985 ft.; drlg. 4,198 ft.
Mid-Continent Pet. Corp. No. 1 Ne-Thah-Pea-Se, SE SE NE sec. 24-11-4. Oswego 3,602 ft.; Prue 3,610 ft.; drlg. 3,863 ft.
Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Billington-B, SW SE SW sec. 32-9-3e. 2nd Wilcox 5,316 ft.; T.D. 5,320 ft.; Halliburton test open 1 hr.; 400 ft. oil and 1 jt. oily mud; R.U.S.T.

Washita County

John Koberg No. 1 Harms, NW NW NE sec. 6-10-16w. T.D. 360 ft.; R.U.R.

SOUTHERN OKLAHOMA

Carter County

Shell Pet. Corp. No. 1 Smith, NW SE NE sec. 30-5s-1e. Drlg. 3,100 ft.

Coal County

Carter Oil Co. No. 1 Clayton, C W½ NE SW sec. 27-2n-9e. Bldg. rig.

Comanche County

E. B. Hane No. 1 Duper, NW cor. sec. 21-2n-13w. S.D. 250 ft. for csg.
Frank Scott No. 1-A Kuntz, SE NE SE sec. 21-4n-11w. Drlg. 2,750 ft.

Jackson County

Ace Gutowsky No. 1 Booker, NW cor. sec. 33-2n-18w. Drlg. 440 ft.
Ace Gutowsky No. 1 Howard, NE SW NW sec. 10-3n-19w. T.D. 750 ft.; S.D.

Johnston County

Patton et al No. 1 McCrummins, C SW SW NE sec. 16-1s-6e. S.D. 1,165 ft.

Jefferson County

Massad & Swansberger No. 1 Barrett, NE cor. SE SE sec. 14-6s-6w. T.D. 1,842 ft.; S.D.

Love County

Sinclair Prairie Oil Co. No. 1 Stockton, SE SE SW sec. 26-6s-2w. T.D. 8,583 ft.; P.B. 6,927 ft.; set 5½-in. 6,624 ft.; drld. plugs; swb. 20 B.O. in 12 hrs.

McCurtain County

Wilcox O. & G. Co. No. 1 Neuman, SW SE SW sec. 30-7s-23e. Drlg. 425 ft.

Marshall County

Stuart & Taylor No. 1 Chestnut, NE cor sec. 23-8s-5e. T.D. 782 ft.; S.D. for tractor.

Murray County

O. O. Owens No. 1 Fryer, NE SE NE sec. 34-1s-3e. T.D. 2,552 ft.; S.D. for rep.

Pushmataha County

Erle Halliburton et al No. 1 Bagwell, SW NE NE sec. 30-3s-15e. Sdy. sh. 2,780-85 ft.; S.S.O.; sd. 2,800 ft.; drlg. 2,825 ft.

Stephens County

Wm. Angle No. 1 Lang, SW SW NE sec. 24-1n-7w. T.D. 5,027 ft. in shale; S.D.O.
Carter Oil Co. No. 1 Harley, C NE NE sec. 24-2s-4w. Drlg. Viola L. 6,030 ft.
Coline Oil Co. No. 1 Johnson, C SW SE SE NE sec. 1-2n-8w. Drlg. 6,665 ft.
Gavin & Kolb No. 1 Bond, CNL NW NE sec. 36-2s-7w. T.D. 2,004 ft. in shale; D.&A.
Helmerich & Payne No. 1 Graham, SW SW NE sec. 12-1n-5w. T.D. 5,014 ft.; drlg. out cmt. at 3,875 ft.
Geo. L. Pace et al No. 1 Tah-Su-Dah, SE NW SW sec. 27-1s-9w. T.D. 2,707 ft.
Ed Parsons No. 1 Blake, C SW NW sec. 22-2n-8w. T.D. 2,625 ft.; P.B. to 1,709 ft.; drlg. by at 1,798 ft.

Tillman County

Cavens et al No. 1 Southerland, SW SW NW sec. 35-4s-16w. R.U. and S.D.
Magnolia Pet. Co. No. 1 Brown, SW SE NE sec. 21-3s-18w. Canyon 3,480 ft.; Strawn 4,335 ft.; drlg. 6,145 ft.
D. S. Smith No. 1-A Hammill, NE NW NW sec. 6-5s-15w. Junked hole at 2,425 ft., T.D.; D.&A.

OKLAHOMA

Week Ending June 19

NORTHERN OKLAHOMA

Alfalfa County

Olson Drlg. Co. et al No. 1 Acre, C SW NE sec. 14-24-11w. O.W.P.B.; fsg. 3,700 ft.

Beckham County

Carter Oil Co. No. 1 Bingham, NE cor sec. 31-8-26w. G.W. 2,120 ft.; T.D. 2,214 ft.; D.&A.
Mid-American Oil Co. No. 1-A Biscoe, SW cor. sec. 28-8-22w. T.D. 1,945 ft.; S.D.

Caddo County

Clyde Becker et al No. 1 Pharris, SE SE NW sec. 24-6-12w. Drlg. 4,540 ft.

Cleveland County

W. R. Hollenbeck No. 1 Norman, NW NW NE sec. 17-9-2w. Drlg. 7,178 ft.

Creek County

M. W. Mosier et al No. 1 Holcomb, SE SW NW sec. 19-18-8. T.D. 2,935 ft.; drlg. on iron.

Garfield County

Ohio Oil Co. No. 1 State, SW cor. sec. 13-23-3w. C.O. to perf.

Garvin County

Carter Oil Co. No. 1 Potts, C E½ SE NW sec. 36-1n-3w. T.D. 542 ft.; off 5%; P.B. 431 ft.; W.O.C.

Grady County

Gulf Oil Corp. No. 1 Thomas, SW NW NW sec. 14-4-5w. Set 16-in. 322 ft.; T.D. 398 ft.; W.O.C.

Grant County

Carter Oil Co. et al No. 1 Crisman, C W½ SW NW sec. 16-25-3w. Drlg. 1,884 ft.
Carter Oil Co. et al No. 1 Kolarik, NW SW sec. 4-26-5w. Drlg. 3,183 ft.

Haskell County

Continental Oil Co. No. 1 Ferguson, SW SE NE sec. 33-8-20. Drlg. 5,080 ft.

Hughes County

C. E. Beal No. 1 Eason, NE NE NW sec. 7-9-11. Cromwell 2,983 ft.; T.D. 3,028 ft.; U.R. 7-in.
Cap Rock Oil Co. No. 1 Parks, SW SW SE sec. 34-7-8. T.D. 4,616 ft. in Wilcox sd.; D.&A.
Carter Oil Co. No. 1 Hamilton, C W½ NE SW sec. 33-4-9. Sylvan 5,474 ft.; drlg. 5,885 ft.
E. H. Moore, Inc., No. 1 Buck, NW SW SW sec. 21-8-10. Wtr. sd. 2,825 ft.; drlg. 2,830 ft.
Moroney & Healey No. 1 Field, C NW SW sec. 11-9-11. Drlg. 2,102 ft.

Kay County

Higdon et al No. 1 Nieman, NE NW NE sec. 9-26-3e. T.D. 519 ft.; fsg.

Kiowa County

Kiowa Oil Corp. No. 1 Finder, C SW NE sec. 4-6-20w. Drlg. 675 ft.

Latimer County

Clark Drlg. Co. et al No. 1 Wilson, C SE SE sec. 15-5-18. Drlg. 6,340 ft.

Lincoln County

Cimarron Oil Corp. No. 1 Ornor, C SW SE sec. 31-17-2e. Set 12-in. 240 ft.; W.O.C.
Exchange Drlg. Co. No. 1 Dowell, SE SE NW sec. 10-14-6. Prue 3,006-57 ft.; good S.O.; T.D. 3,065 ft.; P. 48 B.O.; comp.
Ross Oil Co. No. 1 Bailey, SE cor. sec. 22-15-6. Drlg. 1,500 ft.

Logan County

Anthony & Marshall No. 1 Fruin-Eckman, SE SE SW sec. 4-16-1e. T.D. 4,975 ft.; waiting on new cable.

Noble County

Lincoln Oil Co. et al No. 1-A Neil, NE cor. sec. 15-23-2w. Wilcox 4,681 ft.; T.D. 4,860 ft.; fsg.
Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Johnson, NW NW SE sec. 4-20-2w. Cherokee 4,850 ft.; Miss. 5,080 ft.; drlg. 5,017 ft.
Summit Drlg. Co. et al No. 1 Dolezal, SE SE SW sec. 8-22-1w. First Wilcox 5,135 ft.; 2nd Wilcox 5,200-54 ft., T.D.; D.&A.

Oklahoma County

Sunray Oil Co. No. 1 Dickson, NW cor. sec. 17-11-1e. Hunton 3,915 ft.; Sylvan 6,100 ft.; Dol. 6,225 ft.; drlg. ahead.

Okfuskee County

Lease Investment Co. No. 1 Evans, SW SE NW sec. 4-13-11. Wilcox 3,162-69 ft., T.D.; flw. 210 bbls. in 16 hrs.; 43.3-grav. oil; to deepen.
Riverland Oil Co. No. 1 Board, NE NW SE sec. 10-13-10. Sd. 1,530-1,600 ft.; S.S.O.

Osage County

Midco Oil Corp. No. 1 Osage, SE SE NW sec. 22-23-6e. Drlg. 2,585 ft.
Norbla Oil Co. No. 1 Osage, SE cor. sec. 35-23-6. Spd.

Pawnee County

Carter Oil Co. No. 1 Wells, C E½ SE NW sec. 30-23-5. Drlg. 882 ft.

Payne County

Bill Riddle No. 1 Van Zandt, NW NW SE sec. 16-18-3e. T.D. 3,910 ft.; D.&A.

Pontotoc County

Boettcher O. & G. Co. No. 1 Cann, SE NW NE sec. 25-4n-7e. Drlg. 2,293 ft.
Clark Drlg. Co. et al No. 1 Richardson, SE SE NW sec. 30-4-8. Cromwell 2,780 ft.; drlg. 3,278 ft.

ARKANSAS

Crittendon County

Stanley Oil Corp. No. 1 Danner, C sec. 18-8n-9e. R.U.

Dallas County

J. C. Kelly No. 1 Serrells, SE SE SW sec. 35-10-16. Drlg. 1,662 ft.

Hempstead County

H. D. Easton et al No. 1 R. M. Lagrove, C NE NE sec. 5-12-26w. 12-in. cmtd. 131 ft.
E. H. Moore, Inc. No. 1 fee, NE cor. E½ SE¼ sec. 21-14-25. Drlg. 4,120 ft.

Little River County

Joe Strahan No. 1 Dierks, SW SE sec. 21-12-28. Junked & abnd.; T.D. 2,354 ft.

Lafayette County

Nivla Oil Corp. No. 1 DeLoy, SW SW SE sec. 19-15s-24w. Drlg. 3,620 ft.

Miller County

E. H. Moore No. 2 Dale, 660 ft. N and W, C sec. 24-15-26. Fsg. 6,079 ft.
Standard Oil Co. No. 1 Sarah Harvey, SW SW SW sec. 33-16s-26w. Drlg. 3,977 ft.

Miller County—Rodessa

McClanahan et al No. 1 W. L. Capps, sec. 11-20-28. 7-in. cmt. 6,016 ft.; T.D. 6,113 ft.; prep. test.

Nevada County

Benedum & Trees No. 1 Grove, sec. 10-14-20. Drlg. 5,735 ft.

Pulaski County

A. L. Kitselman No. 2 Kitselman, Jr., SE SE SW sec. 2-1s-13e. Drlg. 550 ft.

Union County—Schuler

Alice-Sydney Oil Co. No. 1 Morgan, NW NE SE sec. 18-18-17. Comp.; flw. 1,393 B.P.D.; T.D. 5,735 ft.
Alice-Sydney Oil Co. No. 1 Pewledge Est., SW SW SE sec. 7-18-17. Drlg. 1,160 ft.
E. M. Jones et al No. 1 First Natl. Bank, NW NE NE sec. 19-18-17. 10-in. cmt. 778 ft.
Ed. M. Jones et al No. 1 C. H. Murphy, NW lot 6 NW¼ sec. 19-18-17. Drk.
Ed. M. Jones et al No. B-1 Murphy Land Co., SW SE NE sec. 13-18-18. M.I.M.
Lion Oil Rfg. Co. No. A-1 M. D. Justiss, NE NW NE sec. 19-18-17. Drk.
Lion Oil Co. No. B-1 Edna Morgan, SW NW SE sec. 18-18-17. 7-in. cmt. 5,827 ft. T.D. 5,827 ft.
Lion Oil Ref. Co. No. 2-A Edna Morgan, NW NE SW sec. 18-18-17. R.U.
Lion Oil Ref. Co. No. 3-A Edna Morgan SE Lot 1, SW sec. 18-18-17. Drk.
Lion Oil Ref. Co. No. 2-B Morgan, NE NW SE sec. 18-18-17. 10 in. 764 ft.
Marine Oil Co. No. 1 fee, NW SW SW sec. 17-18-17. 16-in. cmt. 20 ft.
Phillips Pet. Co. No. 1 E. Gan, SW SE NE sec. 18-18-17. R.U.
Phillips Pet Co. No. 2 E. Gan, SE SW NE sec. 18-18-17. Drk.
Phillips Pet. Co. No. 1 M. Justiss, SE Lot 6, NW sec. 18-18-17. 10 in. cmt. 860 ft.
Phillips Pet. Co. No. 2 M. Justiss, NE Lot 2, SW sec. 18-18-17. R.U.

Union County—Other

Sklar Oil Corp. No. 1 W. T. Fitzgerald, SW NW SW sec. 8-18-15. R.U.
Marine Oil Co. No. B-6 W. B. Thompson, SW NE NE sec. 10-18-13. Comp. pumped 40 B.P.D.; T.D. 3,585 ft.
W. D. Wingfield et al No. 1 So. Kraft Corp., SW NE sec. 18-16-14. Cg. 3,162 ft.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo—Rodessa

Blackwell O. & G. Co. No. 3 Neugent, sec. 8-23-16. Drlg. 6,238 ft.
Drillers, Inc., No. 1 Glasse-Means, SW NE SE sec. 9-23-15. T.D. 6,076 ft.; tstg.
J. E. Jones No. 1-A Parker, SW cor. sec. 4-23-16. T.D. 6,010; rmg.
R. W. Norton No. 1 Payne, C SE SE sec. 27-23-16. Drlg. 10,760 ft.
R. W. Norton No. 5 Starke, SW sec. 17-23-16. Comp.; flw. 21 B.P.H.; T.D. 5,973.
R. W. Norton No. 6 Starke, NE sec. 17-23-16. Drlg. 4,756 ft.
R. W. Norton No. 11 Starke (a), NE sec. 17-23-16. Drlg. 200 ft.
Standard Oil Co. No. 2 L. J. Kaempfer, NE NW SW sec. 9-23-16. Rg. liner; T.D. 5,988.
Standard Oil Co. No. 2 Sarah Kaempfer, SW SW NE sec. 9-23-16. Comp.; flw. 30 B.P.H.; T.D. 5,988.
Standard Oil Co. No. 3 Sarah Kaempfer, NW NW SE sec. 9-23-16. Comp.; flw. 39 B.P.H.; T.D. 5,975.
Standard Oil of La. No. 4 Sarah Kaempfer, NE sec. 9-23-16. Drlg. 1,000 ft.
Surf Oil Co. No. 1 Allison, NE sec. 8-23-16. Drlg. 5,593 ft.
Surf Oil Co. No. 1 Upchurch, NE sec. 8-23-16. Drlg. 5,332 ft.
United Gas No. 7 fee 574, SW NW sec. 16-23-16. Drlg. 5,559 ft.
United Gas No. 8 fee 574, NW cor. sec. 16-23-16. Drk.

United Gas No. 11 Pitts Unit, SE NW sec. 13-23-16. 7-in. cmt. 6,026; T.D. 6,038.
United Gas No. 2 Starke, C SW SW sec. 9-23-16. Drlg. 5,955 ft.
United Gas No. 5 Young, NW sec. 27-23-16. Comp.; ga. 51,000,000 ft. gas; T.D. 6,790 ft.

N. LOUISIANA WILDCATS

Bienville Parish

DeSota O. & G. Co. No. 1 Ashley, SW SE sec. 15-16-10w. Drlg. 4,280 ft.
Hunt Oil Co. et al No. 1 Bodcaw, SE sec. 30-14-5w. Drlg. 5,060 ft.
Lide & Greer No. 2 Davis, NW NE sec. 12-16-5w. Drlg. 290 ft.

Bossier Parish

Arkansas-La. No. 2-B Werner, NE cor. sec. 7-17-11. Drlg. 4,445 ft.
Ray P. Overiess et al No. 1 Birenhern, NW NW NE sec. 23-21-14. S.D. 98 ft.
Premier Inv. Co. No. 10 Weaver, NE SW NW sec. 14-19-11. Comp.; pump 40 B.P.D.; T.D. 397 ft.
Producers O. & G. No. 1 R. Johnson, NE sec. 5-17-11. Drlg. 4,380 ft.
Triangle Drlg. Co. No. 1 C. Howell, NW sec. 26-17-12. Drlg. 3,996 ft.
United Gas No. 1 S. L. Herold, 660 ft. S and W. NE sec. 31-17-4. Drlg. 4,460 ft.
United Gas No. 1-A Jeter Unit, SW sec 24-17-12. T.D. 5,147; 7-in. 5,045; W.O.C. S.
United Gas No. 3 L. Schmitt, NW sec. 14-17-12. R.U.
United Gas No. 2-I H. C. Skannal, SW sec. 25-17-12. Gas well; hold for ga.; T.D. 5,156.

Caddo Parish

J. G. Abney No. 1 Thigpen & Herold, NW SW sec. 15-21-16. Cg. 1,820 ft.
W. D. Ambrose No. 1 Pender, NW NE SW sec. 11-20-15. 6-in. cmtd. 2,212 ft.; T.D. 2,215 ft.
W. D. Ambrose No. B-1 Pender, sec. 11-20-15, SW NW SW. Drlg. 150 ft.
Calatex O. & G. No. 3-A Agurs, SW cor. sec. 6-16-6. W.O.S.R.; T.D. 2,483 ft.
Chew & Chew No. 1 Standard Oil, SE sec. 32-21-16. 7-in. csg. 935 ft.; T.D. 961 ft.; W.O.C.S.
Paul Cooper No. 2 Rodgers, NW SW SW sec. 11-20-15. Comp.; pump 45 B.P.D.; T.D. 2,204.
Custer Oil Co. No. 1 Wemple, N½ NW sec. 14-20-15. Pump. 25 B.P.D.; T.D. 2,206 ft.
T. B. Donnell No. 4 Stokeley, SW sec. 5-20-16. 6-in. cmtd. 950 ft.; W.O.C.S.
T. B. Donnell No. 5 Stokeley, SW sec. 5-20-16. 7-in. cmt. 948 ft.
W. C. Feazel No. 1 Pitts, SE NE sec. 8-23-16. R.U.
C. L. Ferguson et al No. 1 Cooney, sec. 35-21-16. T.D. 1,003 ft.; tstd. S.W.; S.D.
Hancock & Uhlman No. 1 Helpman, sec. 16-21-16. 6-in. cmtd. 1,002 ft.; T.D. 1,009 ft.; tstg.
W. J. Hunter et al No. 1 Stoer, NW SW NE sec. 10-15-15. T.D. 6,012; 7-in. cmtd. 6,012; W.O.C.S.
Marine Exp. Co. No. 1 Herold, NW sec. 10-21-16. R.U.
Orr et al No. 1 Acme Fee, Cen. sec. 15-21-16. Drlg. 50 ft.
Tom Pappas No. 2 Spell, SW sec. 28-21-15. Drlg. 1,345 ft.
Prairie River Synd. No. 1 Hutchinson, SW NW sec. 15-15-12. Drlg. 7,770 ft.
J. J. Shulman No. 1 Bickham, NE sec. 28-21-5. Drlg. 50 ft.
Simplex Oil Co. No. 11 Glassell, NE SW sec. 10-20-15. T.D. 2,200; 6-in. 2,185; W.O.C.S.
Stanolind O. & G. Co. No. 123 Dillon, NW SE sec. 14-21-15. Comp.; pmp. 45 B.P.D.; T.D. 1,670 ft.
Stanolind O. & G. Co. No. 124 Dillon, NW SE sec. 14-21-15. Drk.
Stewart Williams No. 2 Connell, SW NE sec. 10-20-15. 10-in. 80 ft.
Surf Oil Co. No. 2 Self, SE NE SE sec. 10-20-15. 6-in. cmtd. 2,202 ft.
R. G. Trippett & D.C.R.O. No. 1 School Bd., NE sec. 16-19-14. R.U.

Claiborne Parish

Atlantic Ref. Co. et al No. 1 F. B. King, SE sec. 35-21-5. Comp.; flw. 12 B.P.H.; T. D. 5,221 ft.
Atlantic Rfg. Co. No. 2 F. B. King, W½ NE SE sec. 35-21-5. R. U.
J. B. Bond No. 1 H. E. Patton, W½ NW NW sec. 36-21-5. Drlg. 5,003 ft.
Gulf No. 1 Henry, S½ NW NE sec. 31-21-4. 7-in. 5,186; T.D. 5,217; W. O. C. S.
Hollifield & McFarland No. 1 M. Patton, N½ NW SE sec. 31-21-4. 7-in. 5,297; T. D. 5,320; W.O.C.S.
T. L. James & Co. No. 1 Baker, W½ SE NE. sec. 25-21-5. Drlg. 4,410 ft.
La. Lse. & Dev. Co. No. 1 R. D. McDonald, W½ NW NW sec. 25-21-5. Drlg. 5,107 ft.
Lyons & Neely No. 2-B Maggie Patton, E½ SE SW sec. 31-21-4. T.D. 5,280 ft. S.D. tankage.
McMillian et al No. 2 Roberta Vaughn, N½ NW NE sec. 36-21-5. Drlg. 4,560 ft.
Magnolia Pet. Co. No. 2 English, S½ SW NE. sec. 31-21-4. Drlg. 4,265 ft.
Magnolia Pet. Co. No. 3 English, N½ SE NW sec. 31-21-5. R. U.
Magnolia Pet. Co. No. 2, H. E. Patton, SW sec. 36-21-5. Drlg. 2,495 ft.
C. R. Schuster et al No. 2 M. S. Patton, S½ NW NE sec. 1-20-5. Drlg. 3,900 ft.
Scouts Oil Co. No. 1 R. Vaughn, E½ NE NW sec. 36-21-5. Comp.; flw. 16 B.P.H.; T.D. 5,283 ft.
Shreveport Oil Corp. No. 1 Edwards, NE sec. 16-20-5w. Drlg. 3,915 ft.
Standard Oil No. 1 F. B. King, 660 ft. N, 330 ft. W, SE SE NE sec. 35-21-5. Comp.; flw. 65 B.P.H.; T.D. 5,306 ft.
Standard Oil of La. No. 2 F. B. King, et al NE sec. 35-21-5w.
J. C. Tippett No. 2 H. E. Patton, sec. 36-21-5. Drlg. 4,743 ft.
P. W. Woodruff No. 2-B McDonald, N½ NE NE sec. 36-21-5. Drlg. 2,310 ft.
P. W. Woodruff No. 1-A McDonald, N½ SE NE sec. 36-21-5. Drlg. 3,660 ft.

De Soto Parish

W. T. Coleman No. 1 Prudhomme, NE SW NE sec. 29-12-11. 10-in. cmtd. 60 ft.
Grogan Oil No. 1-A Ramsey, sec. 36-11-11. Drlg. 2,360 ft.
Superior Oil Co. of Okla. No. 1 Joyner, SE NW SW sec. 28-11-12. Drlg. 4,118 ft.

Franklin Parish

Jensen & Bailey No. 1 Grayson, C NE sec. 36-12-6e. Cg. 1,744 ft.

Grant Parish

Burkett et al No. 1 Morrison, 156 ft. E and W, NW SW SW sec. 10-9-1e. T.D. 1,534; S.D.
R. W. Fair No. 1 R. L. Gray, NW cor. 180-ac. tr. T.D. 4,026; S.D. W.O.
H. M. S. Corp. No. 1 McNeely, sec. 21-6n-3w. Drlg. 2,165 ft.
Harvey Weir No. 1 Calfax Bk. & Tr. Co., NE NW sec. 15-7n-3w. 10-in. cmtd. 160 ft.; W.O.C.S.

Lincoln Parish

J. D. Carruthers No. 1 Aycock, N½ SW SW sec. 6-20-4. R.U.
B. O. D. C. and H. D. Easton No. 1 G. W. Dye, NE NE sec. 21-19-4w. Drlg. 4,350 ft.
Glassell & Glassell No. 1 Gray, SE sec. 16-20-3e. Drlg. 5,200 ft.
Lyons & Neely No. 1 Carruthers, N½ NE NW sec. 6-20-4. 5-in. Cmt. 5,290; W.O.C.S.
Lyons & Neely No. 1 Effie P. Taylor, S½ NW NW sec. 6-20-4. Drlg. 1,578 ft.
E. T. Oakes-H. D. Easton and Evans No. 1 R. L. Sanderson, NW SE NW sec. 36-18-1w. Drk.

Natchitoches Parish

J. T. Lent No. 1 Locke, NE SE SW sec. 26-9-9. S.D. 2,926 ft.

Ouachita Parish

J & H Oil Co. No. 2-A Frost Lbr. Co., SW NW sec. 36-19-3e. Comp.; flw. 3,000,000 ft. gas; T.D. 2,181.

Red River Parish

Glassell & Whitehurst No. 1 LeLong, NE NW NE sec. 25-12-11. Drlg. 150 ft.
Gulf Prod. Co. No. 41 E. T. Robinson, NW sec. 25-13-11. Comp.; pump 62 B.P.D.; T.D. 2,553.
Perla Oil Co. No. 1 DeLong, 330 ft. S and E. C sec. 23-12-10. 7-in. cmtd. 1,023 ft.; S.O.; T.D. 1,039 ft.
J. D. Wadley No. 1 McClelland, SE NE sec. 24-13-11. Tstd. dry; T.D. 2,550; W.O.
Yandell & Rogers No. 4 Caspari, SW SE SW sec. 27-13-11. Drlg. 1,500 ft.

Sabine Parish

Ellis Prod. Co. No. 1 Wright, NW SW sec. 4-5-12. R.U.
Odell Henson No. 1 Long Bell, SE NE SW sec. 5-8-13. S.D. 1,690 (1st hole junked and rig skidded).
Kirk-Green-Way Inc. No. 1 Whitney Corp., NW NE sec. 8-9-13. T.D. 5,707 ft.; D.S. showed mud and S.W.; S.D.
Perla Oil Co. No. 1 Brown, SE SW NW sec. 16-9-13. T.D. 1,557; acidized; Tstg.
Prod. O. & G. Co. No. 1 Lynch, SW NE SW sec. 29-9-13. Tstg. S.O.; W.O.
Remine et al No. 1 4-L Co., SW SW sec. 7-5-12. R.U.
Roy Drlg. Co. No. 4 Burkett, SE NW SW sec. 10-9-13. T.D. 2,001; prep. test.
A. C. Scott No. 1 Bowman-Hicks Lbr. Co., sec. 23-9-13. T.D. 3,098 ft.; W.O.S.R.
Willis & Dowden No. 1 Lynch, SW NE SW sec. 29-9-13. T.D. 1,608 ft.; arg. tst.
Windsor No. 1 H. Brown, NW SW NW sec. 16-9-13. 7-in. csg. 1,507; W.O.C.S.
Windsor No. 1 M. Elliott, SE NE NW sec. 17-9-13. R.U.

Tensas Parish

Ark. Fuel Oil Co. No. 1 Hardwood, SE NW NW sec. 8-11-10e. Loc.
H. M. Jones et al No. 1 Chicago Mill & Lbr. Co., NE sec. 30-12n-10e. T.D. 798 ft.; blew out after stng. 8 mo.; gauging 30,000,000 ft. gas and 10,000 bbls. wtr.; drld. out bridge and well blew out again and bridged over; T.D. 798 ft.; W.O.; T.D. 798 ft.; blew out again and bridged.

Webster Parish

Magnolia No. 2 D. G. Cox, SW SE NE sec. 22-21-10. Drlg. 7,535 ft.
Magnolia Pet. Co. No. 2 G. W. Cole, NE NW NE sec. 27-21-10. Drlg. 5,985 ft.
Magnolia Pet. No. 6 Ira Cox, NE NE SE sec. 23-21-10. Drlg. 5,655 ft.
Magnolia Pet. Co. No. 2 A. J. McCook, SW sec. 22-21-10. Drlg. 1,310 ft.
Ohio Oil Co. No. 1 S. P. D. Coyle, NW SE SW sec. 23-21-10. Perf. csg. & tstg.; T.D. 8,452.
Ohio Oil Co. No 2 R. M. Coyle, SE sec. 22-21-10. T.D. 8,397; cond. mud.
Ohio No. 1 S. P. D. Coyle and W. Cox, SW SW SE sec. 23-21-10. Drk.
Ohio Oil No. 1 T. Crichton, Acct. No. 2, SE NE sec. 21-21-10. Drk.
Ohio Oil No. 1 L. M. Gardner, NE sec. 22-21-10. Drlg. 7,571 ft.
Ohio Oil Co. No. 2 A. J. Hodges, NE NW SW sec. 23-21-10. Perf. csg. & tsg.; T.D. 8,517.
Ohio No. 7-B R. L. Holloway, 586 ft. N, 756 ft. E line, sec. 23-21-10. R.U.
L. R. Skidmore No. 1 Barnett, NE NW SW sec. 29-17-9. T.D. 3,785 ft.; S.D.
Standard Oil of La. No. 1 E. L. Stewart, SE SE SE sec. 32-21-10. Drlg. 7,017 ft.
Woodley Pet. Co. No. A-2 L. C. Cox, SW NE sec. 22-21-10. Drlg. 5,850 ft.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 Brookshire, sec. 66-12s-3e. 18⅝-in. csg. 237 ft.; 13⅜-in. csg. 2,125 ft.; drlg. sh. and shells 5,361 ft.

Bay St. Elaine—Terrebonne Parish

F. J. LeBlanc et al No. 1 Wurzlow, sec. 17-22s-18e. T.D. 1,185 ft., corrected.
Texas Co. No. 14 State, sec. 20-22s-18e. T.D. 5,115 ft.; P.B. and sdtrkd.; drlg. sdy. sh. 4,667 ft.

Bayou Cocotrix—Terrebonne Parish

Shell Pet. Corp. No. 1 Pelican, sec. 35-17s-15e. T.D. 10,325 ft.; fsg.
Shell Pet. Corp. No. 2-B Realty Operators, sec. 18-17s-15e. 10¾-in. csg. 2,481 ft.

Big Lake—Cameron Parish

Union Sulphur Co. et al No. 1 J. O. Heber, sec. 18-12s-8w. T.D. 1,854 ft.; 7-in. csg. 1,854 ft.
Union Sulphur Co. No. 1 Henry Hebert, sec. 18-12s-8w. R.U.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 37 Watkins, sec. 8-12s-12w. S.D. 5,285 ft.

Cameron Meadows—Cameron

Burton-Sutton Oil Co. No. 6 School Land, sec. 16-14s-13w. Drlg. sd. 3,982 ft.
Magnolia-Humble O. & R. Co. No. 20 Cameron Meadows, sec. 21-14s-13w. R.U.

Charenton—St. Mary Parish

Pan American Prod. Co. No. 3 Laws Realty Co., sec. 25-12s-9e. T.D. 8,860 ft.; fsg.
Pan American Ref. Co. No. 4 Laws Realty Co., sec. 30-13s-10e. Drk.
Pan American Prod. Co. No. 1 South Coast Corp., sec. 30-13s-10e. T.D. 7,923 ft.; rec. 1,000 ft. of P.L.O. on D.S.T. 7,906-23 ft.; 7-in. csg. 7,906 ft.; drlg. S.W. sd. 7,985 ft.
Pan American Prod. Co. No. 1 Veeder, sec. 30-13s-10e. Drk.

Choctaw—Iberville Parish

Standard Oil Co. No. 10 Grove, sec. 52-9s-11e. Drlg. sd. 990 ft.
Standard Oil Co. No. 6 Gay, sec. 52-9s-11e. Drlg. sdy. L. 4,423 ft.

Darrow—Ascension Parish

Humble O. & R. Co. No. 10 Darrow. Drlg. sh. and L. 6,236 ft.
Kiva Oil Co. No. 1 Duplessis, sec. 69-10s-2w. R.U.

Dog Lake—Terrebonne Parish

Texas Co. No. 5 State, sec. 5-22s-16e. 10¾-in. csg. 1,505 ft.; T.D. 7,231 ft.; P.B. 6,310 ft. to sidetrack.

Fausse Point—Iberia Parish

Texas Co. No. 3 State, sec. 35-11s-8e. 10¾-in. csg. 1,245 ft.; drlg. sdy. sh. 3,590 ft.

Four Isle—Terrebonne Parish

Texas Co. No. 9 L.L.&E., sec. 24-21s-16e. Drlg. sd. 2,943 ft.

Garden Island—Plaquemines Parish

Texas Co. No. 21 State, sec. 37-23s-33e 7-in. csg. 5,275 ft.; perf. csg. 4,958-98 ft.; I.P. 256 B.P.D. through ½-in. choke.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 18 Castle, sec. 34-10s-12w. Drlg. sd. 7,243 ft.
Union Sulphur Co. No. 15 Barbe, sec. 1-9s-8w. T.D. 6,730 ft.; P.B. 3,930 ft.; drlg. sh. 5,802 ft.
Union Sulphur Co. No. 5 Kaufman, sec. 13-7s-8w. T.D. 7,052 ft.; 7-in. csg. 7,042 ft.
Union Sulphur Co. No. 6 Mayo-Reeves sec. 12-9s-8w. 9⅝-in. csg. 6,851 ft.; perf. csg. 6,648-54 ft.; testing.

Gueydan—Vermilion Parish

Pure Oil Co. No. 6 Mulney Investment Co., sec. 34-11s-1w. 10¾-in. csg. 1,049 ft.

Hackberry—Cameron Parish

Burton Oil Co. No. 2 Lewis, sec. 22-12s-10w. Drlg. sh. and sd. 2,054 ft.
Burton-Sutton Joint Interest No. 2-A Duhon, sec. 22-12s-10w. T.D. 4,699 ft.; 7-in. csg. 4,661 ft.
W. T. Burton No. 2 R. Vincent, sec. 22-12s-10w. T.D. 4,492 ft.; 7-in. csg. 4,455 ft.; no report.
Burton-Sutton Oil Co. No. 3 Vincent, sec. 22-12s-10w. Drlg. sd. 521 ft.
Emanon Oil Co. No. 1 Porter Ellender, sec. 21-12s-10w. Fsg. at 1,656 ft.
Stanolind O. & G. Co. No. 7 Carter and Sweeney, sec. 22-12s-10w. T.D. 4,322 ft.; wash to bottom.
Stanolind O. & G. Co. No. 1-B Duhon, sec. 27-12s-10w. Drlg. sh. and L. 4,891 ft.
Stanolind O. & G. Co. No. 4 Duhon, sec. 22-12s-10w. 10¾-in. csg. 1,273 ft.; T.D. 4,574 ft.; testing.
Stanolind O. & G. Co. No. 25-B Gulf Land fee, sec. 15-12s-10w. 20-in. csg. 158 ft.; drlg. sh. and L. 7,441 ft.
Stanolind O. & G. Co. No. 4 Lacey, sec. 27-12s-10w. R.U.
Stanolind O. & G. Co. No. 19 School Land, sec. 16-12s-10w. Drlg. sh. 1,920 ft.
Union Sulphur Co. No. 9 Doiron, sec. 37-12s-10w. Drlg. sd. 3,916 ft.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1 Banta, sec. 40-13s-9e. 9⅝-in. csg. 7,030 ft.; core sd. 9,579 ft.
Herton Oil Co. No. 7 Carter, sec. 38-13s-9e. Core S.W. sd. 7,174 ft.
Herton Oil Co. No. 2 Roanes, sec. 40-13s-9e. T.D. 6,642 ft.; 7-in. csg. 6,629 ft.
Shell Pet. Corp. No. 25 Heyd, sec. 40-13s-9e. Drlg. sh. 3,988 ft.

Jennings—Acadia Parish

Frank W. Bennett et al No. 1 Brethern and Christ Church, sec. 41-7s-2w. R.U.
W. T. Burton Oil Co. No. 2 J. J. Roboria, sec. 42-9s-2w. Drlg. sd. 3,256 ft.
Cosmo Pet. Co. No. 1 Jenning Heywood, sec. 41-9s-2w. S.D. 200 ft.
Alfred Glassell No. 1 R. McFarlan, sec. 41-9s-2w. Drlg. sh. and L. 5,910 ft.
Alfred Glassell No. 1 Troushelle, sec. 42-9e-2w. T.D. 7,156 ft.; 7-in. csg. 7,034 ft.
Stanolind O. & G. Co. No. 11 Crowley, sec. 48-9s-2w. Drk.
Stanolind O. & G. Co. No. 18 Houssiere-Latrielle, sec. 47-9s-2w. 8⅝-in. csg. 5,358 ft.; 6⅝-in. csg. 7,005 ft.; core sd. 7,955 ft.
Superior Oil Prod. Co. No. 2 Iowa-Jennings, sec. 41. Drlg. sh. 5,563 ft.
Superior Oil Prod. Co. No. 3 Jennings, sec. 42-9s-2w. T.D. 6,754 ft.; run Schlumberger.
Superior Oil Co. No. 5 Leckelt, sec. 42-9s-2w. R.U.
Superior Oil Co. No. 6 Leckelt, sec. 42-9s-2w. 10¾-in. csg. 1,501 ft.; W.O.C.
Superior Oil Prod. Co. No. 4 Leckelt, sec. 42-9s-2w. Drlg. sh. 6,467 ft.
Superior Oil Co. No. 1 Moresi, sec. 41-9s-2w. Drlg. sdy. sh. 5,402 ft.

Lirette—Terrebonne Parish

Humble O. & R. Co. No. 1 Wurzlow, sec. 32-19s-19e. R.U.

Lafitte—Jefferson Parish

Texas Co. No. 4 Lafitte (O.W.D.D.), sec. 20-17s-24e. T.D. 9,998 ft.; stuck drill stem.
Texas Co. No. 2 Milling, sec. 20-17s-24e. Dredging canal.
Texas Co. No. 7 Rigolet, sec. 29-17s-24e. Coring sh. 10,328 ft.
Texas Co. No. 1 State-Bayou Norman sec. 28-17s-24e. S.D. 9,902 ft.; P.B. to 3,684 ft. to sidetrack.

Lake Hermitage—Plaquemines Parish

Gulf Ref. Co. No. 7 Lafourche, sec. 12-18s-25e. Drlg. sd. 1,337 ft.

Lake Pelto—Terrebonne Parish

Texas Co. No. 17 State, sec. 17-23s-18e. Drlg. sh. 1,215 ft.

Leesville—Lafourche Parish

Gulf Ref. Co. No. 2 Allen Land Co., sec. 26-21s-22e. T.D. 3,797 ft.; 7-in. csg. 3,760 ft.
Texas Co. No. 65 Leesville, sec. 27-21s-22e T.D. 4,084 ft.; 7⅝-in. csg. 4,063 ft.; I.P. 514 B.P.D. through ⅝-in. choke.

Lockport—Cameron Parish

Magnolia Pet. Co. No. 6 Freeburg, sec. 9-10s-9w. T.D. 6,485 ft.; fsg.

New Iberia—Iberia Parish

Wm. Hellis No. 8 Bernard, sec. 54-12s-7e. S.D. 5,012 ft.
Wm. Hellis No. 3 Schwing, sec. 57-12s-7e. S.D. 4,962 ft.; salt; P.B. and sdtrkd.; drlg. sh. 4,742 ft.
Texas Co. No. 3 Bryant, sec. 25-12s-7e. Drlg. 1,819 ft.
Wm. Hellis No. 9 Bernard, sec. 54-12s-7e. Drlg. sh. 3,576 ft.
Wm. Hellis No. 5 Bullock-Burke, sec. 52-12s-7e. Core sand 5,107 ft.
Texas Co. No. 3 Duhe, sec. 26-12s-7e. Drlg. sdy. sh. 2,812 ft. No report.
Texas Co. No. 6-B Hanzen, sec. 54-12s-7e. Core oil sd. 4,366 ft.
Texas Co. No. 1 Schwing, sec. 71-12s-7e. Drlg. sh. 3,032 ft.

Roanoke—Jefferson Davis Parish

Humble O. & R. Co. No. 6 Kratzer, sec. 11-9s-4w. T.D. 8,704 ft.; perf. csg. 8,706-08 ft.; swabbing.

Sorrento—Ascension Parish

Sorrento Oil Co. No. 1 Bernard, sec. 9-19s-14e. T.D. 6,708 ft.; P.B. 5,373 ft.; drlg. sh. and L. 6,670 ft.

South Roanoke—Jeff Davis Parish

Union Sulphur Co. et al No. 1 T.R.S. Farms Co., sec. 23-10s-4w. 12½-in. csg. 1,835 ft.; drlg. sh. 6,059 ft.

South Jennings—Jeff Davis Parish

Stanolind-Amerada Pet. Corp. No. 2 Calcasieu Natl. Bank, sec. 10-10s-3w. 13⅜-in. csg. 1,987 ft.; T.D. 9,170 ft.; S.D.

Starks—Calcasieu Parish

J. R. Turnbull No. 1 Industrial Lbr. Co. sec. 20-9s12w. S.D. 6,433 ft.; abd.
Turnbull et al No. 2 Industrial Lbr. Co., sec. 19-9s-12w. Drlg. sh. 3,050 ft.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 846 fee, sec. 29-9s-10w. Drlg. sh. and L. 2,776 ft.
Union Sulphur Co. No. 847 fee, sec. 29-9s-10w. R.U.

St. Martinsville—St. Martin Parish

Tide Water Oil Co. No. 1-C Smedes, sec. 57-11s-6e. T.D. 9,044 ft.
Tide Water Oil Co. No. 4 Smedes, sec. 57-11s-6e. Drlg. sh. and shells.

Tepetate—Acadia Parish

Continental Oil Co. No. 1 Gullery, sec. 34-7s-2w. Drlg. sh. 4,876 ft.
Continental Oil Co. No. 9-A Homeseekers Dev. Co., sec. 28-7s-2w. Drlg. sh. 7,290 ft.
Continental Oil Co. No. 2 Macabees, sec. 22-7s-2w. Drlg. sd. 8,005 ft.
Continental Oil Co. No. 2-B Veronie, sec. 28-7s-2w. R.U.

Valentine—Lafourche Parish

Pan American Prod. Co. No. 1-A Harang,

60 ft. due west of No. 1 Harang. Drlg. sd. and gravel 468 ft.
Pan American Prod. Co. No. 5 Harang, sec. 8-17s-20e. 16-in. csg. 235 ft.; P.B. and S.T.; T.D. 4,761 ft.; P.B. and S.T.; T.D. 5,892 ft. oil sd.
Pan American Prod. Co. No. 6 Harang, sec. 8-17s-20e. T.D. 5,416 ft.; run 7-in. csg.

Vinton—Calcasieu Parish

Katina Oil Co. No. 1 Vincent, sec. 34-10s-12w. 8-in. csg. 1,108 ft.

White Castle—Calcasieu Parish

Shell Pet. Corp. No. 4 Shingle, sec. 12-11s-12e. T.D. 8,903 ft.; P.B. 8,717 ft.; milling out of csg. at 8,027 ft.; drlg. sdy. sh. 8,984 ft.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. T.D. 5,426 ft.; left 900 ft. of D.S. in hole.
Humble O. & R. Co. No. 1 Floyd Williams sec. 34-8s-1e. T.D. 8,037 ft.; P.B. 7,404 ft.; strkd. 7,642 ft.; drlg. sh. 7,766 ft.
J. G. Mayo et al. No. 1 Bank of Commerce, sec. 19-7s-1e. 10¾-in. csg. 1,710 ft.; W.O.C.

Allen Parish

Humble O. & R. Co. No. 3 Bel, located in cratered hole, sec. 26-6s-7w. 10¾-in. csg. 165 ft.; T.D. 2,870 ft.; 7-in. csg. 2,766 ft.; shot well; failed to stop flwg. S.W.; S.D.

Cameron Parish

Humble O. & R. Co. No. 1 Hanzen, sec. 5-12s-6w. 13⅜-in. csg. 3,046 ft.; drlg. sdy. sh. 7,490 ft.
Pure Oil Co. No. 2 State, sec. 14-13s-3w. Driving piling.
Southern Sulphur Co. No. 2 State, sec. 29-15s-10w. S.D. 2,611 ft.

Cameron Parish—Gulf of Mexico

Superior Oil Prod. Co. et al No. 1 State-Gulf of Mexico, 3,800 ft. W, 6,200 ft. S of SE cor. of irregular sec. 4-15s-8w. Driving piling.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Elliott, sec. 3-9s-2e. 10¾-in. csg. 1,950 ft.; drlg. sh. 5,156 ft.

East Feliciana—Wild

Cavalier Oil Co. No. 1 Brickham, sec. 88-4s-1w. T.D. 4,500 ft.; abd.
Koch et al No. 1 Andrews, sec. 69-2s-3e. 10-in. csg. 1,086 ft.; S.D.

Iberia Parish

E. J. Beaullied No. 1 Baez, sec. 35-12s-7e. Drlg. sh. 7,890 ft.
Jefferson Lake Oil Co. No. 414 State Lake Pigneur, Twp. 12s-5e. Top salt 990 ft.; set 10¾-in. csg. 5,095 ft.; top oil sd. 6,915 ft.; 7-in. csg. 6,930 ft.; cd. salt 7,059-60 ft.; P.B. 5,500 ft.; drly. sh. 6,450 ft.

Jefferson Parish

Louisiana Crusader Oil Corp. No. 1 Langley, sec. 36-7s-5w. T.D. 7,450 ft.; P.B. to sdtrk. at 6,868 ft.; T.D. 8,965 ft.; will run csg.
Triangle Oil Co. No. 1 Conroe, sec. 125-12s-11e. T.D. 2,461 ft.; R.U.

Jefferson Davis Parish

Stanolind O. & G. Co. No. 2-B Calcasieu Natl. Bank, sec. 28-7s-3w. 13⅜-in. csg. 1,950 ft.; drlg. sdy. sh. 7,812 ft.

Lafourche Parish

Gulf Oil Corp. No. 3 State, sec. 36-23s-21e. R.U.
Fohs Oil Co. No. 1 State Lake, sec. 65-17s-19e. 9⅝-in. csg. 8,384 ft.; oil sd. 9,391-9,406 ft.; T.D. 9,406 ft.; 7-in. csg. 9,406 ft.

Plaquemines Parish

Gulf Oil Corp. No. 1 Bay-Adams sec. 32-52s-19. T.D. 4,673 ft.; abd.
Tide Water Oil Co. No. 3 Manhattan Fruit Co., sec. 26-21s-30e. Drlg. sh. 5,610 ft.

Rapides Parish

C. L. Decker No. 1 Lee Lbr. Co., sec. 21-5n-3e. Drlg. sdy. sh. 2,642 ft.
R. D. Webb No. 1 A. M. Brasher, sec. 22-4n-2w. S.D. 5,236 ft.

St. Bernard Parish

Gulf Oil Corp. No. 1 Lake Lery, sec. 28-14s-14e. Drlg. sd. 6,422 ft.
Southern Sulphur Co. No. 2 State Lake Borgne, sec. 38-14s-15e. 13⅜-in. csg. 303 ft.; drlg. sdy. sh. 3,212 ft.

St. Charles Parish

Amerada Pet. Corp. and La. Ld. & Expl. Co. No. 1 State, sec. 13-15s-20e. Cd. oil sd. 6,828-95 ft.; T.D. 7,124 ft.; 9⅝-in. csg. 7,118 ft.

St. Landry Parish

Gulf Oil Corp. No. 1 Haas & Hirsch, sec. 12-6s-7e. Drlg. sh. 2,849 ft.

St. Martin Parish

Geo. E. Lilly et al No. 1 Martin, sec. 32-9s-7e. Top salt 4,293 ft.; T.D. 4,450 ft.; S.D.
Texas Co. No. 3 State, sec. 14-10s-9e. cmtd. on bttm.; T.D. 8,208 ft.; top salt 8,175 ft.; P.B. 7,600 ft.; top of cmt. plug 7,674 ft.; sdtrkd.; drld. into old hole at 7,800 ft.; P.B. 7,652 ft.; sidetrack 7,794 ft.; core oil sd. 7,798-7,804 ft.

St. Mary Parish

Texas Co. No. 1 Horse Shoe Bayou, sec. 40-17s-9e. T.D. 10,975 ft.; 7⅝-in. csg. 18-in. csg. 101 ft.; T.D. 12,261 ft.; blew out; caught fire; burned for 1 hr. and hole bridged; rigging up drlg. barge.
Texas Co. No. 1 State-Bateman Lake, sec. 21-16s-12e. Drlg. sh. 10,329 ft.

TEXAS

Week Ending June 19

GULF COAST FIELDS

Hastings—Brazoria County

Humble O. & R. Co. No. 2 J. T. Baker, Perry & Austin Sur. T.D. 6,080 ft.; 5½-in. csg. 6,030 ft.
Humble O. & R. Co. No. 14-A Cecil Brown, W. H. Snyder Sur. T.D. 6,090 ft.; reaming.
Humble O. & R. Co. No. 3 R. D. Haden, coring sh. 6,050 ft.
Humble O. & R. Co. No. 1 Knack, Perry & Austin Sur. R.U.
Humble O. & R. Co. No. 1 South Texas Grain Co., Perry and Austin Sur. Drlg. sh. 5,891 ft.
Showers and Moncrief No. 2 Hughey, H. T.&B. Sur. No. 29. T.D. 5,760 ft.; I.P. 691 B.P.D., ¼-in. choke.
Stanolind O. & G. Co. No. 3 R. L. Autrey, H.T.&B. Sur. No. 37. Drlg. sh. 5,600 ft.
Stanolind O. & G. Co. No. 4-A Avitts, A.C H.&B. Sur. No. 1. R.U.
Stanolind O. & G. Co. No. 1 Mary Condon, H.T.&B. Sur. No. 29. 16-in. csg. 90 ft.; T.D. 6,080 ft.; 7-in. csg. 6,004 ft.; I.P. 640 B.P.D.; ¼-in. ck.
Stanolind O. & G. Co. No. 2 Mary Condon, H.T.&B. Sur. No. 29. 10¾-in. csg. 1,644 ft. Drlg. sd. 5,133 ft.
Stanolind O. & G. Co. No. 4 Curkett, H.T. &B. Sur. No. 30. Sh. 4,050 ft.
Stanolind O. & G. Co. No. 8 Curkett, H. T.&B. Sur. No. 35. Core sh. 6,049 ft.
Stanolind O. & G. Co. No. 10 Drake, H.T. &B. Sur. No. 36. Drlg. sh. 2,000 ft.
Stanolind O. & G. Co. No. 10 Duke, H.T. &B. Sur. No. 36. R.U.
Stanolind O. & G. Co. No. 3 T. C. Edwards, Wm. Henry Sur. T.D. 6,080 ft.; 7-in. csg. 6,010 ft.
Stanolind O. & G. Co. No. 5 Grote, A.C. H.&B. Sur. No. 10¾-in. csg. 1,673 ft.; T.D. 6,080 ft.; 7-in. csg. 5,945 ft.
Stanolind O. & G. Co. No. 6 Emil Grote, A.C.H.&B. Sur. R.U.
Stanolind O. & G. Co. No. 1-C Heram Moore, R. A. Magle Sur. R.U.
Stanolind O. & G. Co. No. 3 J. C. Hutchins, H.T.&B. Sur. No. 36. T.D. 6,080 ft.; 7-in. csg. 5,811 ft.; I.P. 656 B.P.D., ¼-in. choke.
Stanolind O. & G. Co. No. 4 Law, H.T.& B. Sur. No. 36. T.D. 6,053 ft.; I.P. 514 B.P.D., ¼-in. choke.
Stanolind O. & G. Co. No. 2 McKibben, H.T.&B. No. 29. Drk.
Stanolind O. & G. Co. No. 3 L. F. McKibben, H.T.&B. Sur. No. 29. T.D. 6,055 ft.; testing.
Stanolind O. & G. Co. No. 1 Massey, H. T.&B. Sur. No. 29. T.D. 6,080 ft.; 7-in. 5,901 ft.; I.P. 630 B.P.D., ¼-in. choke.
Stanolind O. & G. Co. No. 2 Moore [illegible] Rassmussen, A.C.H.&B. Sur. T.D. 6,098 ft.; 5¾-in. csg. 6,073 ft.
Stanolind O. & G. Co. No. 6 Steve Paul, A.C.H.&B. Sur. No. 2. T.D. 6,080 ft.; run csg.
Stanolind O. & G. Co. No. 10 Steve Paul. Drlg. sh. and L. 3,100 ft.
Stanolind O. & G. Co. No. 11 Steve Paul, A.C.H.&B. Sur. Drlg. sh. 1,240 feet.
Stanolind O. & G. Co. No. 12 Paul, A.C.H. &B. Sur. Drk.
Stanolind O. & G. Co. No. 1 Schaefer. Drlg. sh. 3,470 ft.
Stanolind O. & G. Co. No. 4 Surface, B. B.B.&C. Sur. T.D. 6,090 ft.; run screen.
Stanolind O. & G. Co. No. 1 Thornton. Drlg. sh. 4,063 ft.
Stanolind O. & G. Co. No. 1 R. E. Turningtine, H.T.&B. Sur. No. 29. T.D. 6,220 ft.; abd.

Lockridge—Brazoria County

Gulf Oil Corp. No. 2 Gibson, J. W. Hall Sur. Coring sd. 6,370 ft.; top gas sd. 6,256 ft.
Gulf Oil Corp. No. 2 Fred Reiss, J. W. Hall Sur. Top sd. 6,359 ft.; 7-in. csg. 6,355 ft.
Gulf Oil Corp. No. 4-A Wilkes and Smith, J. W. Hall Sur. T.D. 6,555 ft.; fsg.
Gulf Oil Corp. No. 2-A Wood, J. W. Hall Sur. Drlg. sh. 3,445 ft.

Manvel—Brazoria County

T. J. Holcombe No. 1 W. A. Gamble, E. Little Sur. T.D. 4,058 ft.; 7-in. csg. 4,044 ft.; tested S.W.; abd.
Texas Co. No. 25 B. W. T. Belcher, H. N. Little Sur. 10-in. csg. 1,176 ft.
Texas Co. No. 30 H.O.F. A.C.H&B. Sur. Drlg. 4,622 ft.
Texas Co. No. 7 Rash, T. Scraggins Sur. T.D. 4,135 ft.; I.P. 325 B.P.D., ¼-in. choke.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 1-A Bernard Ld. & Dev. Co. O.W.D.D.; T.D. 10,059 ft.; twisted off; P.B. and S.T.; T.D. 9,878 ft.; 5-in. csg. 4,845 ft.; perf. csg. 9,827-35 ft.; flowing; no gauge.
Harrison and Abercrombie No. 4 Bernard River Ld. and Development Co., Charles Breen Sur 13⅜-in. csg. 1,405 ft.; 9⅝-in. csg. 7,005 ft.; drlg. sd. and sh. 10,368 ft.

Calhoun—Heyser—Victoria County

George Echols No. 5 Bennett, J. Galban Sur. 10¾-in. csg. 636 ft.; W.O.C.
Humble O. & R. Co. No. 15-A P. H. Welder, J. M. Rios Sur. Drlg. sh. 5,212 ft.
Humble O. & R. Co. No. 6 Welder, J. M. Rios Sur. Drlg. sh. 4,930 ft.
Normandie Oil Co. No. 1 J. G. Cook, A. Sisneros Sur. R.U.
Portilla Drlg. Co. No. 7-C P. H. Welder, J. M. Rios Sur. T.D. 5,495 ft.; 7-in. 5,495 ft.; I.P. 8 B.P.H., ¾-in. choke.
Portilla Drilling Co. No. 8-C P. H. Welder, A. Sisneros Sur. R.U.

Anahuac—Chambers County

Gulf Oil Corp. No. 2 Pommer, sec. 40, H &T.C. Sur. R.U.
Humble O. & R. Co. No. 2 Drought, sec. 46, H.&.T.C. Sur. T.D. 7,117 ft.; I.P. 694 B.P.D., ¼-in. choke.
Humble O. & R. Co. No. 1 W. L. Garth, sec. 68, T.&N.O. Sur. 9⅝-in. csg. 1,020 ft.
Humble O. & R. Co. No. 3 Lord, H.&T.C. Sur., sec. 50. T.D. 7,110 ft.; 5½-in. csg. 7,097 ft. Failed to flow.
Humble O. & R. Co. No. 5 Marshall, sec. 50, H.&T.C. Sur. Drlg. sh. 3,085 ft.
Humble O. & R. Co. No. 17 Tyrell, sec. 52, H.&T.C. Sur. Drlg. sh. 6,921 ft.
Humble O. & R. Co. No. 8 Zappe, sec. 51, H.&T.C. Sur. T.D. 7,100 ft.; W.O.C
Salt Dome Oil Co. No. 2-A Lawrence, S. Barrow Sur. Drlg. sh. 5,337 ft.

Seabreeze—Chambers County

Sun Oil Co. No. 2 H. O. Acom, H.T.&B. Sur. No. 23. 18⅝-in. csg. 91 ft.; T.D. 8,764 ft.; reaming.
Sun Oil Co. No. 1 Jackson, Yarbo Sur. Drlg. sh. and L. 1,884 ft.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 1 Earl R. Davis, Chadrick Burney Sur. T.D. 6,625 ft.; 7-in. csg. 6,601 ft.; W.O.C.
Sun Oil Co. No. 4 Chambers, M. A. Carroll Sur. Drlg. sh. and L. 3,765 ft.

Big Creek—Fort Bend County

Barnett Pet. Corp. No. 2 J. H. P. Davis B. Nickson Sur. T.D. 3,080 ft.; P.B. and sdtrkd.; drlg. sh. 3,434 ft.
Gulf Oil Corp. No. 76 Davis, M. Young Sur. Drlg. sh. 2,649 ft.

Blue Ridge—Fort Bend County

Telshaw-Reese and Echelson No. 1 Blakely, E. Drew Sur. R.U.

Thompson—Fort Bend County

H. M. Naylor No. 11 S. P. Gehr, S. Kennedy Sur. T.D. 5,393 ft.; swabbed dry.
H. M. Naylor No. 11 Gehr, S. Kennedy Sur. T.D. 5,398 ft.; 7-in. csg. 5,280 ft.; R.U. to pmp.

Orchard—Fort Bend County

Gulf Oil Corp. No. 52 Moore, James Frazier Sur. Drlg. sh. 3,925 ft.
Gulf Oil Corp. No. 53 Moore, J. Frazier Sur. Drlg. sh. and L. 5,571 ft.

High Island—Galveston County

Stanolind O. & G. Co. No. 62-A Cade, M. Fitzsimmons Sur. Drlg. sh. 5,426 ft.
Stanolind O. & G. Co. No. 1 C. E. Smith, M. Dunman Sur. Drk.
Stanolind O. & G. Co. No. 15-A Smith, M. Dunman Sur. Drlg. sh. 5,692 ft.

Dickinson—Galveston County

Atlantic Ref. Co. No. 1 Lippman, W. G. Banks Sur. Drlg. sh. 7,952 ft.
Diadem Oil Corp. of Texas No. 2 W. J Way, E. P. Epperson Sur. 6⅝-in. csg. 8,191 ft.; drlg. sh. 8,884 ft.
Humble O. & R. Co. No. 19-A Maco Stewart, W. K. Wilson Sur. T.D. 8,984 ft.; 7-in. cs⅛. 8,962 ft.; perf. csg. 8,565-75 ft.; testing.
Humble O. & R. Co. No. 8-B M. Stewart W. Wilson Sur. T.D. 9,463 ft.; P.B. 8,380 ft.
Humble O. & R. Co. No. 1-C Stewart, W. K. Wilson Sur. R.U.
W. E. McKinney et al No. 3-A Galveston-Houston Elec. R.R., W. K. Wilson Sur T.D. 8,510 ft.; P.B. to sdtrk.; sdtrkd. at 8,300 ft.; P.B. to 7,500 ft.; T.D. 8,839 ft.; 6⅝-in. csg. 8,829 ft.
Pan American Prod. Co. No. 3 Craig, W. K. Wilson Sur. T.D. 9,000 ft.; 7-in. csg. 8,430 ft.
Pure Oil Co. No. 2-B Shelor, W. G. Banks Sur. Drlg. L. 3,740 ft.
Stanolind O. & G. Co. No. 7 State, 13⅜-in. csg. 2,013 ft.; T.D. 6,472 ft.; 9⅝-in. csg. 6,090 ft.; drlg. sh. 7,624 ft.
Turman Oil Co. No. 2 Stewart, W. K. Wilson Sur. Drlg. sh. 5,404 ft.

Batson—Hardin County

Bunte O. & G. Co. No. 1 Melhome, J. Melhome Sur. T.D. 3,493 ft.; W.O. csg.

Silsbee—Hardin County

Humble O. & R. Co. No. 1 Kirby, G. W Brooks Sur. T.D. 6,862 ft. oil sand; reaming.
Republic Prod.-Houston Oil Co. No. 16 Brooks, G. W. Brooks Sur. T.D. 6,915 ft.; run Schlumberger.
Republic Prod. Co.-Houston Oil Co. No. 13 Brooks. T.D. 6,980 ft. oil sd.; run csg.
Republic Prod. Co.-Houston Oil Co. No. 17 Brooks, G. W. Brooks Sur. 10¾-in. csg. 1,714 ft.

Bammel—Harris County

Geo. Lawrence No. 2 Zapp, J. Farwell Sur. R.U.

Clinton—Harris County

Stanolind O. & G. Co. No. 1 Candelari O.W.D.D.; cutting and pulling drill pipe to workover.
Stanolind O. & G. Co. No. 1 D. A. Oates, C. Martinez Sur., Abst. 543. 9⅝-in. csg. 6,771 ft.; P.B. and sdtrkd.; drld. to 8,075 ft.; tstg.; pulling screen and liner to plug back.

Goose Creek—Harris County

Bob Foster No. 1 Esenhour, Wm. Scott Sur. S.D. 2,257 ft.

Pierce Junction—Harris County

A. & P. Production Co. No. 9 Whitehead, J. Hamilton Sur. No. 51. T.D. 4,984 ft.; 5-in. csg. 4,593 ft.; perf. csg. 4,494-4,504 ft.; bailed dry; reperf. csg.; abd.
Gulf Oil Corp. No. 13-C Cain, J. Hamilton Sur. Drlg. sh. 2,730 ft.

South Houston—Harris County

Smith and McDannald No. 2 L. R. Phillips, Lot 146, H.T.&B. Sur. No. 6. T.D. 4,079 ft.; P.B. and sdtrkd. 2,762 ft.; T.D. 4,014 ft.; 5½-in. csg. 3,900 ft.; I.P. 412 B.P.D., ¼-in. choke.
Stanolind O. & G. Co. No. 1 Bennett, Unit 13, H.T.&B. Sur. No. 6. 16-in. csg. 90 ft. T.D. 4,800 ft.; 6⅝-in. csg. 4,673 ft.
Stanolind O. & G. Co. No. 2. Dist. No. 23. T.D. 4,133 ft.; P.B. 2,200 ft.; T.D. 4,062 ft.; 5¾-in. csg. 4,031 ft.

Tomball—Harris County

Amerada Pet. Corp. and Stanolind O. & G. Co. No. 2 W. W. Baker, J. House Sur. T.D. 5,583 ft.; 7-in. csg. 5,581 ft.; I.P. 355 B.P.D., ¼-in. choke.
Humble O. & R. Co. No. 2 Black, J. Pruitt Sur. Drlg. sh. 820 ft.
Humble O. & R. Co. No. 1-B Jurgens. Drlg. sh. 3,750 ft.
Humble O. & R. Co. and Magnolia Pet. Co. No. 2-C Schlutz, J. House Sur. T.D. 5,583 ft.; comp. for gas well.
Humble O. & R. Co. No. 1 Katie Stebly, J. Pruitt Sur. T.D. 5,565 ft.; I.P. 525 B.P.D., ¼-in. choke.
Humble O. & R. Co. No. 1 M. W. Stebly, J. Pruitt Sur. T.D. 5,566 ft.; 5-in. csg. 5,559 ft.; I.P. 21 B.P.H. ¼-in. choke.

Amelia—Jefferson County

Humble O. & R. Co. No. 1 Bridges, A. S. Avery Sur. T.D. 6,778 ft., 5½-in. csg. 6,773 ft.
Humble O. & R. Co. No. 3 Crook, C. Williams Sur. T.D. 6,780 ft.; I.P. 559 B.P.D.
Humble O. & R. Co. No. 1-E Dishman, C. Williams Sur. T.D. 6,777 ft.; I.P. 591 B.P.D., ¼-in. choke.
Humble O. & R. Co. No. 2 Fitzgerald, C. Williams Sur. Drlg. sdy. sh. 5,590 ft.
Humble O. & R. Co. No. 2 Gaspard, H. Savey Sur. Drlg. sdy. sh. 4,871 ft.
Humble O. & R. Co. No. 5 Langham, C. Williams Sur. 9⅝-in. csg. 1,025 ft.
Humble O. & R. Co. No. 4 Quinn, C. Williams Sur. T.D. 6,778 ft., 5½-in. csg. 6,775 ft.
Humble O. & R. Co. No. 1 Mulligan, C. Williams Sur. T.D. 6,803 ft.; P.B. 6,778 ft.; 5½-in. csg. 6,797 ft.
Humble O. & R. Co. No. 7 Peveto, C. Williams Sur. Drlg. sh. and L. 4,463 ft.
Humble O. & R. Co. No. 5 Phelan, C. Williams Sur. T.D. 6,779 ft.; 5½-in. csg. 6,774 ft.; perf. csg. 6,765-68 ft.; I.P. 26 B.P.H., ¼-in. choke.
Humble O. & R. Co. No. 2-B Pinchback, C. Williams Sur. T.D. 6,777 ft.; 5½-in. csg. 6,743 ft.; I.P. 587 B.P.D., ¼-in. choke.
Humble O. & R. Co. No. 1 Shelby, A. Savey Sur. Drlg. sh. 6,126 ft.
Humble O. & R. Co. No. 1-B Tyrell, Combest, A. Savey Sur. T.D. 6,779 ft.; 5½-in. csg. 6,774 ft.; I.P. 320 B.P.D., ¼-in. choke.
Humble O. & R. Co. No. 1-C Tyrell-Combest, A. Savey Sur. Drlg. sd. 6,884 ft.
Glenn H. McCarthy No. 6 Longfellow, C. Williams Sur. T.D. 5,406 ft.; I.P. 426 B.P.D.
Glenn H. McCarthy No. 7 Longe, H. Williams Sur. R.U.
Stanolind O. & G. Co. No. 2 W. P. McCormick, H. Williams Sur. T.D. 5,388 ft.; 7-in. csg. 5,363 ft.
Stanolind O. & G. Co No. 3 Sargl, H. Williams Sur. Core sh. 4,648 ft.
Stanolind O. & G. Co. No. 4 Sargl, H. Williams Sur. Core sh. 5,385 ft.
Stanolind O. & G. Co. No. 5 Sargl, H. Williams Sur. Drlg. sh. & shells. 2,600 ft.
Sun Oil Co. No. 1 Gailey, Houston Sur. 16-in. csg. 107 ft.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 2-B Pipkin, Wm. McFadden Sur. Drlg. sh. and L. 4,142 ft.
Stanolind O. & G. Co. No. 2 May Fitzhugh, Wm. McFadden Sur. Drlg. sd. and L. 1,768 ft.
Stanolind O. & G. Co. No. 4-A Pipkin, T.&N.O. Sur. Drlg. sd. and L. 2,780 ft.

Fannett—Jefferson County

Gulf Oil Corp. No. 8 Junker, Wm. Smith Sur. 10¾-in. csg. 1,948 ft.; drlg. sh. 2,730 ft.

LaBelle—Jefferson County

Sun Oil Co. No. 1 John Ward, 933 ft. S of No. 2 Broussard, Wm. Burton Sur. 18⅝-in. csg. 109 ft.; T.D. 8,598 ft.; 9⅝-in. csg. 8,538 ft.; core sh. 9,515 ft.

Nome—Jefferson County

Shell Pet. Corp. No. 3 Texas Public Service Co., W. Aldridge Sur. T.D. 6,050 ft.; completed, no gauge.
Sun Oil Co. No. 2 Long-Moubles, J. Blair Sur. T.D. 6,050 ft.; comp. for gas well.
Sun Oil Co. No. 1 Tindell, A. Horton Sur. Core sh. 5,650 ft.
Sun Oil Co. No. 8 Paggi, J. W. Kirby Sur.

T.D. 6,051 ft.; 7-in. csg. 6,016 ft.; I.P. 30 B.P.D., ¼-in. choke.
Sun Oil Co. No. 9 Paggi, J. W. Kirby Sur R.U.

Cleveland—Liberty County

Gulf Oil Corp. No. 18-C Kirby, J. Pleasant Sur. T.D. 5,886 ft.; run csg.

Esperson—Liberty County

General Crude Oil Co. No. 29 Moores-Bluff, M. Dunman Sur. T.D. 2,980 ft.; 9⅝-in. csg. 2,968 ft.; I.P. 191 B.P.D., ¼-in. choke.

Hankamer—Liberty County

Gulf Oil Co. No. 25 E. W. Boyt, Amos Allen Sur. R.U.

Hardin—Liberty County

Jack Frazier No. 1 Roberts, H. B. Johnston Sur. Drk.

Hull—Liberty County

Bishop Oil Co. No. 1 C. R. Wilson, J. Devore Sur. Oil sd. 780-88 ft.; T.D. 4,127 ft.; 7-in. csg. 2,204 ft.; perf. csg. 2,286-90 ft.; P.B. and strkd.; drlg. sh. 2,274 ft.
Hamil and Smith No. 1 Barngrover, J Devore Sur. T.D. 6,631 ft.; perf. csg. 5,705-5,806 ft.; swbg.; R.U. to pmp.
Houston Prod. Co. No. 1 Hannah fee, J. Devore Sur. T.D. 4,982 ft.; 7-in. 4,980 ft.
Republic Prod. Co. No. 162 Dolbear, J. Devore Sur. T.D. 2,960 ft.; P.B. and sdtrkd.; T.D. 3,277 ft.; 7-in. csg. 2,916.
Texas Co. No. 7 Hannah fee, J. Devore Sur. Drlg. sh. and L. 4,517 ft.

Markham-Matagorda County

Turman Oil Co. No. 2 Hamil and Hamil, T. E. Hudson Sur. T.D. 3,670 ft.; I.P. 239 B.P.D., ¼-in. choke.

Bay City—Matagorda County

Hamman Expl. Co. No. 2 Cleveland, E Hall Sur. T.D. 8,182 ft.; 7-in. csg. 8,173 ft.; perf. csg. 8,154-64 ft.; flwd. P.L.O. and S.W.; killed.

Buckeye—Matagorda County

United North & South Development Co. No. 1 G.B.M. Cotton League. Drlg. sd. 667 ft.

Palacios—Matagorda County

Glenn H. McCarthy No. 1 Foley Land Co L. Goodwin Sur. T.D. 8,068 ft.; P.B. and strkd.; stuck drill stem at 8,000 ft.; washing over.
Sun Oil Co. No. 1 Bay Shore Farms, Lewis Goodwin Sur. 13⅜-in. csg. 1,910 ft.

Hawkinsville—Matagorda County

Sun Oil Co. No. 2 Craig, T. Williams Sur. Top salt 796 ft.; base salt 2,099 ft.; 18⅝-in. csg. 2,174 ft.; 13⅜-in. csg. 3,700 ft.; 9⅝-in. csg. 5,689 ft.; T.D. 5,969 ft.; hole cleaned; P.B. and sdtrkd.; T.D. 5,965 ft.; rmg.

Van Vleck—Matagorda County

Skelly Oil Co. No. 2 Johnson, M. Cummins Sur. T.D. 7,950 ft.; making drill stem test.

Livingston—Polk County

Ownby Drlg. Co. No. 10 Pratt, A. Viesca Sur. T.D. 4,220 ft.; swbd. in; showed gas; shut in; comp. for dry gas well.

Segno—Polk County

J. K. Dorrance No. 2 Wing, I.&G.N. Sur. No. 15. T.D. 5,204 ft.; 7-in. csg. 5,185 ft.
J. K. Dorrance No. 3 Wing, I.&G.N. Sur. No. 15, 10¾-in. csg. 709 ft.; coring sh. 5,100 ft.
Gulf Oil Corp. No. 1 Ragan, I.&G.N. Sur. No. 15. T.D. 6,087 ft.; reaming to straighten hole.
Humble O. & R. Co. No. 4-B Kirby, Marcell Victor Sur. T.D. 5,335 ft. oil sd.; 7-in. 5,320 ft.
Laquinta Oil Co. No. 5 W. G. Wing, I.& G.N. Sur. No. 15. Top oil sd. 5,188 ft.; 7-in. csg. 5,186 ft.; I.P. 528 B.P.D., ¼-in. choke.

Quintana-O'Connor-Greta—Refugio County

Illinois Pet. Co. No. 5 Heard, Ximines Sur. Drlg. 5,618 ft. No report.
Nordan and Morris No. 7 O'Connor, J. Hewitson Sur. Drlg. sh. 5,617 ft. No report.
Quintana Pet. Co. No. 7 Heard, T. H. Webb Sur. Cg. sh. 5,800 ft. No report.
Quintana Pet. Co. No. 3 Bauer, Ximines Sur. T.D. 5,918 ft.; tstg.; comp., no gauge.
Quintana Pet. Co. No. 50-A Tomoconnor, Blk. 8, Swisher Sur. Drlg. sh. 5,600 ft.
United Gas Corp. No. 47 Lambert, Swisher Sur. Drlg. sh. 4,837 ft.
United Gas Corp. No. 53 Lambert, Swisher Sur. Drlg. sh. 3,912 ft.
United Gas Co. No. 54 Lambert, J. M. Swisher Sur. Drlg. sh. 5,780 ft.
United Gas Corp. No. 55 Lambert, Swisher Sur. Drlg. 2,715 ft.
United Gas Corp. No. 12 J. J. O'Brien. Drlg. sh. 8,930 ft.
United Gas Co. No. 9, Ryals Townsite. T.D. 4,921 ft.; comp., no gauge.

Spurger—Tyler County

Republic Production Co.-Houston O. Co. No. 3 Hurd, N. Hurd Sur. 10¾-in. csg. 2,331 ft.; cored oil sd. 7,632-40 ft.; making drill stem test.

Keeran—Victoria County

Gulf Oil Corp. No. 11 J. M. Keeran, M. DeLeon Sur. T.D. 6,361 ft.; tstd. S.W.; squeezed off perf.; W.O.C.
Union Oil Co. No. 5 Keeran, M. DeLeon Sur. Drlg. sh. 4,830 ft.

McFadden—Victoria County

Transwestern Oil Co. No. 3 J. A. McFadden, Julus Varian Sur. S.D. 6,133 ft.

Placedo—Victoria County

Barnsdall-American Liberty Oil Co. No. 10 J. M. Pickering, Wm. Rupley Sur. T.D. 7,243 ft.; perf. csg. 5,280-92 ft.; run screen and liner.
Barnsdall Oil Co.-American Liberty Oil Co., S.A.&M.G. Sur. R.U.
Barnsdall Oil Co. and American Liberty Oil Co. No. 18 Pickering and Roos, S. A.&M.G. Sur. No. 6 T.D. 4,769 ft.; I.P. 11 B.P.H. through ⅞-in. choke.
Lion O. & R. Co. No. 3 S. W. Wright, S.A.&M.G. Sur. T.D. 4,775 ft.; R.U. to pmp.
Magnolia Pet. Co. No. 9 Chas. Sklar, S.A. &M.G. Sur. T.D. 4,777 ft.; 7-in. csg. 4,764 ft.; P.B. 4,775 ft.; W.O.C.
H. B. Ownby No. 6 Traylor, S.A.&M.G. Sur. R.U.
H. B. Ownby No. 7 T. T. Traylor, S.A.& M.G. Sur. No. 7. T.D. 4,774 ft.; 5½-in. csg. 4,758 ft.
Salt Mount Oil Corp. No. 1 O. A. Lois, Wm. Rupley Sur. T.D. 4,806 ft.; 7-in. csg. 4,805 ft.; pumped 60 B.P.D.
Shell Pet. Corp. No. 5 Houston Natl. Bank, S.A.&M.G. Sur. Drlg. sh. 5,701 ft.
Superior Oil and Gillespie No. 10 J. J. Hosek, S.A.&M.G. Sur. T.D. 4,770 ft.; 7-in. 4,763 ft.; I.P. 90 B.P.D. through ⅞-in. choke.

Clay Creek—Washington County

Oak Oil Corp. No. 1 G. Cockrell, J. F Perry Square Sur. T.D. 1,365 ft.
Sun Oil Co. No. 6 Droger, J. Perry Sur. Drlg. salt 4,466 ft.

Five Corners—Wharton County

Texas Co. No. 7-B Pierce Est., J. Caldwell Sur. T.D. 5,555 ft.; 7-in. csg. 5,554 ft.; flwd. oil and S.W.; squeezed off bttm. with cmt.; flwd. 75% S.W.; killed; reset screen; swabbed S.W.; pulling screen.

Louise—Wharton County

C. E. Oil Co. No. 1 R. C. Fair, Morris and Cummins Sur. No. 290. Abd. 5,174 ft.

Magnet—Wharton County

Atlantic Ref. Co. No. 1-B H. C. Cockburn, J. Smith and McKenzie Sur. T.D. 5,540 ft.; oil sd.; 7-in. csg. 5,540 ft.; perf. csg. 5,533-37 ft.; flowed some oil and gas; killed to W.O.
Humble O. & R. Co. No. 1 Cockburn, S. Castleman Sur. R.U.
W. W. Van Allen-Texas Crusader No. 1 Sweet, J. Smith and McKenzie Sur. T.D. 5,550 ft.; oil sd.; 7-in. 5,531 ft.; perf. csg.; failed to flow; pulling screen.

Pickett Ridge—Wharton County

Texas Co. No. 33-A Pierce Est., G.B.&N Sur. No. 4; 9,000-ft. test. Drlg. sh. and L. 6,727 ft.

Withers—Wharton County

Texas Co. No. 30-C Pierce, Wm. Pettus Sur. T.D. 5,555 ft.; 7-in. csg. 5,550 ft.; P.B. 5,549 ft.; I.P. 508 B.P.D. through ¼-in. choke.
Texas Co. No. 34-C Pierce Estate, Wm. Pettus Sur. R.U.

GULF COAST WILDCATS

Austin County

Cockburn Oil Corp. No. 1 Bartay-Mott and Steno, S.S.E.Y. Sur. 10¾-in. csg. 360 ft.

Brazoria County

Humble O. & R. Co. No. 1 Settegast, Perry and Austin Sur. Drlg. sh. and L. 3,305 ft.
Pure Oil Co. No. 1 P. M. Slade, S. F Austin Lge. T.D. 7,842 ft.; hole cleaned; repair rig.
Texas Co. No. 2 Robbins, James W Brougham Sur. 13⅜-in. csg. 5,498 ft · 9⅝-in. csg. 6,060 ft.; drlg. sh. 7,465 ft.

Colorado County

Coyle & Concord No. 3-B Powell, I.&G.N Sur. No. 45. R.U.
Humble O. & R. Co. No. 1 Relaw Land Co., J. L. Duggan Sur. Abd. 5,725 ft.

Fort Bend County

Marien Oil Co. No. 1 Frank Jurca, sec. 26, H.&T.C. Sur. Drlg. sh. 5,900 ft.
Dick Schwab and Gem Oil Co. No. 1 David Fitzgerald Sur. 10¾-in. csg. 1,058 ft.
Trone No. 2 Trone, H.&T.C. Sur. No. 67. T.D. 909 ft.; flowed dry gas.

Harris County

Superior Oil Co. No. 1 Butler, Eehrhardt Sur. Drlg. sh. and L. 8,807 ft.

Jackson County

Cockburn and Hargrove No. 1 Ward Properties, I.&G.N.R.R. Sur., sec. 23. Drlg. sh. 4,650 ft.
George W. Greet et al No. 1 J. R. Davis, David Hoffman Sur. S.D. 4,925 ft.

Jefferson County

Magnolia Pet. Co. No. 1 J. H. Phelan, T.&N.O. Sur. No. 14, 13⅜-in. csg. 3,016 ft.; T.D. 8,573 ft. (corrected); 7-in. csg. 8,440 ft.; P.B. 8,440 ft.; flowed distillate; shut in; T.P. 3,100 lbs.; C.P. 3,000 lbs.
H. E. Hebert and Smith No. 1 Broussard, H.T.&B. Sur., sec. 10. Drlg. sh. 2,118 ft.

Liberty County

Jack Frazier et al No. 1 B. F. Haoach-Hughes B. Johnson Sur. 10¾-in. csg. 1,143 ft.; T.D. 7,612 ft.; tested 400 lbs. pressure on D.S.T. 7,488-7,612 ft.; recovered 360 ft. of drlg. mud cut with oil; run csg.

Matagorda County

Continental Oil Co. No. 2 Hawkins Est., D. McCarty Sur. 20-in. csg. 120 ft.; 11¾-in. csg. 5,409 ft.
Royal O. & G. Corp. No. 1 T. J. Ewing, Burnett and Sojouner Sur. Drlg. sh. 6,970 ft.
Texas Co. No. 1 Crawford, Y. Springer Sur. R.U.
United North & South Development Co No. 1, J. S. Cotton Sur. T.D. 9,895 ft. 7-in. csg. on bttm.; cored to 9,978 ft.; set screen; flowing 5 B.P.H. through ⅞-in. choke; T.P. 3,450 lbs.; C.P. 3,-300 lbs.

Montgomery County

C. E. Gates No. 1 South Texas Long Leaf Lbr. Co., Walker Co. Sch. Ld. Coring sh. 5,883 ft.

San Jacinto County

Cockburn Oil Corp. et al No. 1 Whitten, Wm. West Sur. Coring 5,290 ft.

Tyler County

McArthur & Nixon No. 1 Kountze, J. A. Hankins Sur. Drlg. sh. 2,770 ft.

Victoria County

Harry Stekoll No. 1 Knolle, C. W. Wilsery Sur. Abd. 5,513 ft.

Washington County

K. D. Harrison and C. E. Starr No. 1 Charles and Wm. Ellerman, Wm. Bridges Lge. 13-in. csg. 290 ft.

S. W. TEXAS WILDCATS

Aransas County

Barnsdall Oil Co. No. 2 Kate Edwards, 330 ft. S line, Lot 85, 660 ft. SW No. 1, Wm. Lewis Sur. Drlg. 8,704 ft.
Danray Oil Co. No. 1 Davis, Tr. 5, Wm Boyd Sur. R.U.

Atascosa County

L. G. Priest No. 1 Bridwell, Tr. 45, Gorman Sur. Drlg. 1,721 ft.

Bastrop County

R. Pulliam No. 1 Yoast, Garcia Sur. R.U.

Bee County

Butler & Turner No. 1 Scott, Sec. 7, Howeth & Singer Sur., Uranga Gr. Stdg. 5,400 ft.
J. J. Cosner No. 1 Franklin Life, Morena Gr. Spdg.
J. R. Dougherty No. 2 Hicks, H. George Sur. Uranga Gr. Drlg. 3,020 ft.

Blanco County

E. L. Nixon No. 1 Hornberger, 1,200 ft. S line, 300 ft. E line, Sur. 723. Drlg. 1,-231 ft.

Brooks County

Gifford Oil Co. No. 1 Singer, Sur. 630. D.&A. 4,210 ft.
Standard of Tex. No. 1 Mestina, Mestina Lse. No. 3 Cg. 5,535 ft.

Caldwell County

F. & W. Drlg. Co. No. 1 Rodenberg, J. Berry Sur. Set csg. 2,014 ft.; W.O.C.
E. H. Grazer No. 1 Field, Dikes Sur. Cg. chalk 1,699 ft.
Housel Oil Co. No. 1 Driscoll, S.D. 1,520 ft.
J. O. Mack, Jr., No. 1 Withers, Wm. House Sur. Drlg. sh. 627 ft.
C. R. Richardson No. 1 Patterson, S. Pettus Sur. Set csg. 780 ft.
G. C. Richardson No. 1 Trammel, E. Berry Sur. R.U.
Lee Ross No. 1 Daugherty, John Tyler Sur. Drlg. 556 ft.
Sherman Nelson No. 1 Etheridge, T. Hunter Sur. T.D. 2,180 ft.; R.U.; W.O.O.

Cameron County

Ruez-Morton No. 1 United Land Irr. Co., Lot 7, Blk. 402, El Jardin Subd. Drlg. 4,112 ft.
Saxet Prod. Co. No. 1 Port Isabel Irr. Co. 600 ft. N line Loma Alta Lake, Sh. 29, Espiritu Santa Gr. Spudded and Stdg.
Stapper Petroleum Corp. No. 1 Port Isabel Irrigation Co., Blk. 17, P.I.I.Co. Subd. Stanto Gr. S.D. 8,000 ft.

Dimmitt County

Wilcox O. & G. Co. No. 1 Light ranch, 330 ft. N and E line, sec. 67. Drlg. 7,010 ft.

Duval County

Govt. Wells Oil Co. No. 1 Lundell, 990 ft. N line, 2,700 ft. E line, sec. 140. Sd. 1,517-22 ft. Comp. gasser, 5,000,000 ft. per day.
Kepley Prod. Co. No. 2 Sevier, sec. 71, Rafael Roselia Gr. D.&A. 3,515 ft.
King Drlg. Co. No. 1 Parr, San Andres Gr. Drlg. 4,750 ft.
Magnolia Pet. Co. No. 1 Weil, Sur. 565. Sd. 2,799-2,812. Tested S.W. Drlg. 2,-863 ft.
Geo. Viterio No. 1 E. E. Cadena, Blk. 6, Cadena Ranch Subd., Hinojosa Gr. D.&A. 6,636 ft.

Edwards County

Amon G. Carter No. 1 Sweeten, Blk. 2, sec. 49. Drlg. 197 ft.
Auld, Dodson & Lyman No. 1 Rigsby, sec. 16. S.S.O. 3,920-22 ft.; tstd. wtr.; T.D. 3,940 ft.

Frio County

Amerada Pet. Corp. No. 1 Harriman, Flores Sur. 306. Lost hole; drlg. sdtrk. hole 5,497 ft.
Pagenkoff & Jamieson No. 2 Blackaller, Gourley Sur. 765. M.I.M.

Goliad County

Goliad Oil Corp. No. 1 Cole, 206 ft. W line, CN&SL, Lot 33, Goliad Town Trs. Blew out at 5,545 ft., T.D.; made gas through blowout preventer take-off comp.; gasser; through D.S. Stopped flg. T.A.
Goliad Oil Co. No. 2 Cole, lot 33, Goliad Town. Tr. Sur. Drlg. 1,611 ft.

Guadalupe County

Fair et al No. 1 Hemple, Williams Sur. T.D. 2,076 ft.; S.D.; oil and wtr. in hole.
Lincoln Pet. Co. No. 1 Baenzinger, Mansola Sur. Set csg. 1,990 ft.; drlg. plugs.
Robertson et al No. 1 Blumberg, M. Baker Sur. Drlg. 1,026 ft.

Jim Wells County

Magnolia Pet. Co. No. 7 Seeligson, 10,433-ac. tr., Los Jaboncillos Gr. D.S.T. 5,-380-86 ft. rec. 17 ft. dist. W.P. 200 lbs. Prep. retest. T.D. 5,404 ft.
Wellington Oil Co. No. 1 C. D. Sevier, 5,877 ft. E line, 5,525 ft. S line, Lois Gr. Fsg. 5,600 ft.

Kendall County

Landon & Peffley No. 1 Seidensticker, Sur. 257, Chorcon Gr. R.U.

Lee County

Elaussa Oil Co. No. 1 Saunders, Von Reeder Sur. Set csg. 3,672 ft.; T.D. 3,675 ft.; prep. swb.
Jas. E. Pederson No. 1 Turner, David Hudson Sur.; W.O. T.D. 6,560 ft.; clg. out.

Live Oak County

R. H. Feltener No. 2 Sanger, Sur. 385. D.&A. 3,259 ft.
Loma Oil Co. No. 1 Schwartz, McKilley Sur. Abst. 19. R.U.
Loma Oil Co. No. 1 Terrill, Houlihan Sur. Drlg. 220 ft.

McMullen County

Edwards, Zock et al No. 1 Two Rivers Ranch Co., 150 ft. S and W lines, SE¼, sec. 60. R.U.
Howell Oil Corp. No. 1 Martin, Sur. 213. S.D. 2,375 ft.
W. L. Hinds No. 1 Rhodes, NE¼, NW¼ sec. 54. Drlg. 602 ft.
E. M. Jones No. 3 Ezell, SE¼, sec. 3, Ezell ranch. D.S.T. 1,533-47 ft.; rec. 750 ft. P.L.O. in 15 min. ⅜-in. ck.; rng. csg.; T.D. 1,547 ft.
Rowan & Nichols No. 1 Rhodes, NE¼ sec. 18, Seale & Morris Sur. Drlg. 1,-020 ft.
C. C. Shumway No. 10 Shiner ranch, sec. 51, Shumway Subd. Drlg. 756 ft.

Milam County

Kingdor Expl. Co. No. 1 White, B. Wickson Sur. Drlg. 66 ft.

Nueces County

J. K. Culton No. 1 Singer, Lot 13, Blk. 39, Encinal Gardens. Drlg. 2,621 ft.
Gillock et al No. 1 Poenisch, Lot 11 sec. 32. M.I.M.
W. L. Hinds Drlg. & Expl. Co. No. 1 River Bros. 80-ac. tr., sec. 301. Cg. 5,-611 ft.
Mills Bennett Prod. Co. No. 1 Heuerman, C. Land Sur. 408. Drlg. sh. 4,810 ft.
Phillips Pet. Co. No. 1 Harney, Sh. 11, Gregoria Farias Gr. (W.O.). Cg. sh. 6,-527 ft.
Seaboard Oil Corp. No. 1-C Chapman, sec. 111, Laureles Farm Lots. R.U.
Seaboard Oil Corp. No. 1 James Luby, Blk. 4, Mary Luby Subd., Petronilla ranch. T.D. 5,333 ft.; set csg. 5,175 ft.; perfg. 5,045-50 ft. Comp. 5½ B.P.H., on ½-in. ck. Killed to rework.
Southern Minerals Corp. No. 1 R. King, sec. 32, King Farm Lots. Sd. 6,515 ft.; tried to blow out; killed; stuck D.S.; fsg.
Taylor Pet. Co. No. 1 Stiles, Blk. 14, sec. 18, Petronilla ranch. Drlg. 6,456 ft.

San Patricio County

Conroe Drlg. Co. No. 1 Foley, SE¼, Blk. 42, Delmos Sur. D.&A. 6,500 ft.
Danray Oil Co. No. 1 Davis, Tr. 5, Wm Boyd Sur. R.U. Set csg. 520 ft. W.O.C.
Eleanor Oil Co. No. 1 Green Est., 167.4-ac. tr., Williamson Sur.; (W.O.). Old T. D. 6,800 ft.; washing down 2,500 ft.
Humble O. & R. Co. No. 1 McCampbell 610.62-ac. tr., Martinez Sur. Drlg. broken sd. 4,428 ft.
Plymouth Oil Co. No. 1-A Odem, subd. 2, A. Herron Sur. Set csg. 1,137 ft. W.O.C.

Starr County

Calderoni-James-Follette No. 1 Rodriguez, Blk. 6, Sh. 56, Porc. 80. Set sur. csg. 100 ft.; S.D.
Donroy Oil Co. No. 1 Ramon, 2,400 ft. SE line, 150 ft. SW line, sec. 150. Cg. 1,281 ft.
Gilcrease Oil Co. No. 1 Castillo, Sh. 7-D, Porc. 77. Sd. 776-82 ft.; S.G.
Henry Mode et al No. 1 Kelsey-Bass, Blk. 7, Porcs. 86 and 87. Drlg. 2,611 ft.
Transwestern Oil Co. No. 2 Slick, 330 ft. N and E lines, sec. 527. Drlg. 5,886 ft.

Webb County

Bridwell Oil Co. No. 1 Longorio, Sur. 691. R.U.
Eugene Garner No. 2 Saldivar, Blk. 12. Sur. 567. Oil sd. 997-1,000 ft.; flwd. 3 B.P.H.; acdzg.; S.D.
O. W. Killam No. 1 Perez, Sur. 1007. D.&A. 2,558 ft.
Lu Tex Oil Co. No. 2-A Lone Star Constr. Co., Porc. 12. T.D. 2,790 ft. S.D.W.O.O.
J. W. Magee No. 1 Garcia, Blk. 21, James Subd. R.U.; S.D.
Paul Meaders No. 1 Garcia, Sur. 338, Loc.
J. R. B. Moore No. 1 Slator, Blk. 7½, Slator subd., Borrego Gr. Spdg.
Perkins, Cullen & Achning No. 1 Garza, Sur. 711. Drlg. 1,020 ft.

Willacy County

Ruez-Morton, Inc., No. 1 F. Armendiaz, C Lot 9, Sh. 4, San Juan de Carricitos Gr. Drlg. 537 ft.
Ruez-Morton, Inc., No. 1 Johnson-Stillman, Lot 14, Blk. 25, Sh. 44, San Juan de Carricitos Gr. S.D. 643 ft.

Wilson County

Maryland Oil Co. No. 1 Rice, 93-ac. tr., Mays Sur. Cg. Edwards, 5553 ft. S. sulfur wtr. S.S. oil.
R. C. Stanley No. 2 Heirholzer, R. Salina Sur. O. sd. 1,025-30 ft. Set csg. to test.

Zapata County

Allison & Abrams No. 1 Vela, Sur. 249. Stdg. 550 ft.
Gilcrease Oil Co. No. 2 Trevino, Blk. 12, sec. 8, Porc. 3. Drlg. 827 ft.
O. W. Killam No. 1 Bruni, Blk. 83, Ranchito Pasture, Borrego Gr. R.U.
J. O. Sheffield No. 1 Buck, Blk. 15, Sur. 273.Testing 1,960-71 ft.

S. W. TEXAS PROVEN

McCampbell—Aransas-San Patricio Counties

Atlantic Ref. Co. No. 2 Maryland Trust Co., 330 ft. N and E lines, Blk. 23. Set csg. 6,516 ft.; T.D., sh. 6,552½ ft.; jetting S.W. and oil; (fluid 95% S.W. and 5% oil); plg. lnr. to deepen.
Atlantic Ref. Co. No. 1-B Murray, Lot 16, Blk. 12. Set csg.; comp. 93 B.P.D. on ⅞-in. ck.; perf. 7,076-80 ft.
Atlantic Ref. Co. No. 1 Porterfield, Lots 9 and 10, Blk. 14. Sd. 7,095-7,105 ft. Completing.
Buckingham Oil Co. No. 8-A McCampbell, "A" Lse., Blk. 42. Drlg. 4,069 ft.
Buckingham Oil Co. No. 11-A McCampbell, Lot 7, Blk. 41. Drlg. 1,221 ft.
Buckingham Oil Co. No. 12-A, McCampbell, Lot 7, Blk. 42. Drlg. 1,020 ft.
Collins & Broughton No. 1 McCampbell, Lot 5, Blk. 37 (W.O.). Drlg. 6,865 ft.
Landreth Prod. Co. No. 3-A McCampbell, Lot 1, Blk. 40. Set csg. 1,249 ft.; W.O.C.
Rutherford & Eaton No. 2 Scrivner, Lots 13 and 14, Blk. 11. Drlg. S.W. Sd. 6,877 ft.
Shasta Oil Co. No. 1 McCampbell, Lot 13, Blk. 10. Loc.

North Dale—Bastrop County

Easton & Manning No. 1 Duran, S. Flint Sur. Cg. sh. 2,296 ft.

Plummer—Bee County

Ann Oil Co. No. 2-B Smith, J. R. Johnson Sur. R.U.
El Toro Oil Co. No. 1 Robertson, Thos. B. Barton Sur. Spdg.
W. C. McBride, Inc., No. 1-B Plummer, Johnson Sur. Plug perf. 3,057 ft.

West Tuleta—Bee County

Salt Dome Oil Co. No. 1 Tuleta Mercantile Co. Sec. 10, Uranga Gr. Drlg. 1,200 ft.
Saltdome Oil Co. No. 1 Striebeck, Blk. 8, sec. 20, Uranga Gr. Sd. 3,136-45 ft.; S.O.; comp. 30 B.P.D. T.D. 3,145 ft.

Von Ormy—Bexar County

J. Beard No. 5 Barragan, Simpson Sur. W.O.C. 300 ft.

Alta Mesa—Brooks County

Standard of Texas No. 4 Garcia, Lse. 2, Tr. 2, Sh. 1-A, La Mestina y Gonzales Sur. Testing 2,590 ft.
Standard of Texas No. 5 Mestina, Lease No. 1. D.S.T. 4,516-26 ft. Rec. 60 ft. fluid, 50% clean oil, 50% frothy, mud, oil & s.w. Cg. ahead 4,565 ft.

Alta Verde—Brooks County

Bishop & Woods No. 1 Mautin, Sur. 311. Set. csg. 50 ft. Drlg. 120 ft.
Lynway Oil Co. No. 1 Singer, Blk. 9, Sur. 436. Sds. 232-34 ft. and 245-47 ft. S.O. Drlg. 352 ft.
Wyrick Well Sur., Inc., No. 1 Singer, Sur. 436. Drlg. 530 ft.
Dick Young No. 5 Singer, Blk. 12, Sur. 312 (W.O.) Sd. 1412-20 ft. Testing.

Luling-Branyon—Caldwell County

Fred Adams No. 3-B Ellison, Jarmon Sur. Comp. 250 B.P.D. Chalks 2,049-2,170 ft.
Chiquita Oil Co. No. 6 Robertson, Neill Sur. Spd.
Colby Oil Co. No. 3 McCrory, Neill Sur. Drlg. 1,527 ft.
Easton & Manning No. 5 Lawler, J. Pinchback Sur. csg. 2,100 ft. Comp. 10 B.P.D.
R. Mallory No. 2 Brown, J. R. Miller Sur. R.U.
Rio Bravo Oil Co. No. 14-L Merriweather, J. Henry Sur. Drlg. ch. 1,726 ft.
Sherman Nelson No. 1 Best, Neill Sur. T.D. 2,284 ft.; W.O. pmp.
B. F. Robinson No. 1 Young, Miller Sur. Set csg. 2,180 ft.; W.O.C.
Rosita Oil Co. No. 1 Lockhart State Bnk., J. Roe Sur. Set csg. 2,004 ft. W.O.C.
Spokane O. Co. No. 2 Starcke, Crenshaw Sur. Drlg. 120 ft.
Taylor Ref. Co. No. 4-B Branyon, D. Cooper Sur. T.D. 1,900 ft.; drlg. sdtrkd. hole 521 ft.
S. M. Vaughy No. 2 Clark, J. Miller Sur. Skdg. on.
S. M. Vaughy No. 5 Flowers, Neill Sur. T.D. 2,160 ft.; bailing.
C. L. Witherspoon No. 5 Robinson, J. Neill Sur. Comp. 40 B.P.D. T.D. 2,215 ft.

Buchanan—Caldwell County

Edwell Oil Co. No. 3-A Cude, Wm. Spillars Sur. R.U.
L. G. Priest No. 1 Chambless, S. Goodman Sur. S.D. 1,000 ft.
Texas Gulf Pet. Co. No. 1 Medlin, Camon Sur. Sat. chalk 2,035-57 ft.; set csg. 2,057 ft.; M.I. rig.

Dunlap—Caldwell County

Kay Oil Co. No. 1 Dunlap, S. Seale Sur. Chalk 1,928-2,036 ft.; set csg.; S.D.
Sherman Nelson No. 1 Moore, Clinton Sur. R.U.
Stapper Pet. Corp. No. 1 Martin, A. Floyd Sur. T.D. 1,800 ft.; S.D.

Larremore—Caldwell County

Lee Ross et al No. 1 Starke, Crenshaw Sur. Set csg. 1,255 ft.; W.O. pmp.

Salt Flat—Caldwell County

Chiquita Oil Co. No. 5 Hickman, G. Hinds Sur. Set csg. 2,639 ft.; W.O.C.

Charamousca—Duval County

N. V. Duncan No. 9 Worden & Draught, Sur. 151. Cg. 1,511 ft.

Colmena—Duval County

Conservative Oil Co. No. 5 D.C.R.C., Blk. 8, Sur. 52. Sd. 1,435-42 ft.; gas; S.D.; W.O.O.
Humble O. & R. Co. No. 4-D D.C.R.C., sec. 385. T.D. 1,487 ft.; prep. perf.
Magnolia Pet. Co. No. 1 D.C.R.C., sec. 49. Comp.; gasser; T.D. 1,553 ft.
Texas Co. No. 4-D D.C.R.C., Sur. 583. T.D. 1,604 ft.; P.B. 1,577 ft.
Wellington Oil Co. No. 5 D.C.R.C., Blk. 10, sec. 51. R.U.

Driscoll—Duval County

Continental Oil Co. No. 15-A Driscoll, sec. 448. Sd. 3,335-41 ft.; comp. 181 B.P.D on ¼-in. choke.

Government Wells—Duval County

Central Prod., Inc., No. 5 Luptack, Sur. 41. Comp. 160 B.P.D. on ⅜-in. choke.; T.D. 2,447 ft.
Humble O. & R. Co. No. 5 Roos, sec. 119. Drlg. sh. 2,038 ft.

Hoffman—Duval County

Cox & Hamon No. 4-A Green, Sur. 118. Drlg. 1,374 ft.
Reliance Oil & Roy. Co. No. 3 Ruiz, Sur. 125. M.I.M.

Labbe—Duval County

Humble O. & R. Co. No. 4 Roos, sec. 119. Set csg. 2,850 ft.; comp. 6,000,000 ft. gas.
Magnolia Pet. Co. No. 5 Labbe, Sur. 1. Sd. 2,850-59 ft.; swbg.

Loma Novia—Duval County

F. J. Gravis No. 4 Hahl, Sur. 64. R.U.
Hamill & Smith No. 14-C Hahl, Sur. 63. Set csg. on sd. 2,573-86 ft.; comp. 100 B.P.D.
Hamill & Smith No. 15-C Hahl, Sur. 63. Cg. 2,565 ft.
Reynosa Oil Co. No. 1-C McLean, Sur. 62. Drlg. 2,717 ft.
Shell Pet. Corp. No. 10 Bishop, Sur. 59 Cg. sd. 2,564 ft.
Shell Pet. Corp. No. 11 Bishop, Sur. 59. T.D. sd. 2,554 ft.; testing.

Lopez—Webb-Duval Counties

W. C. Billings No. 4 fee, Sur. 2. Oil sd. 2,299½-2,303½ ft.; set csg. 2,298 ft.; comp. 99 B.P.D. on ¼-in. choke.; sd. 2,298-2,304 ft.
Superior Oil Co. No. 25 Billings, Sur. 109. Comp. 48 B.P.D. on ⅛-in. choke; sd. 2,292-2,334 ft.

North Sweden—Duval County

Argo Oil Co. No. 1 Carrillo, NE¼, sec. 9. Testing sd.
Arkansas Fuel Oil Co. No. 1 Vaello Puig, 330 ft. N and E line, sec. 10, Sweden Farm Lots. Cg. sd. 4,711 ft.
Benedum & Trees Oil Co. No. 2 Puig, 750-ac. tr., San Andres Gr. Drlg. 3,843 ft.
Benedum & Trees O. Co. No. 3 Puig, 330 ft. N line, 990 ft. W line lease, San Andres Gr. Drlg. 557 ft.
Frank Gravis No. 3 Puig, sec. 24, San Andres Gr. Set csg. on sd.; W.O.C.
Highland Oil Co. No. 2 Farias, sec. 9, Sweden Subd. Oil sd. 1,803-13 ft.; set csg.; W.O.C.
Navarro O. Co. No. 1 Rossi, Blk. 11, sec. 35. Spudded.
Parr Oil Co. No. 2 Puig, 150-ac. tr., Sur. 24, Santos Flores Gr. Set surf. csg. 514 ft.; W.O.C.
Reynosa Oil Co. No. 1 Wilson, Blk. 9, Sweden Farm Lots. Sd. 4,763-75 ft.; comp. 192 B.P.D. on 5/32-in. choke.
Reynosa Oil Co. No. 2 Wilson, Blk. 9. Drlg. plugs in sd.
Standard of Kansas No. 1 Parr, San Andres Gr. Set surf. csg.; W.O.C.
Standard of Kansas No. 1 Rossi, Blk. 10. Moved rig off.

Palangana—Duval County

Penn Palangana Oil Co. No. 1 C. K. Gravis Sur. 250. Drlg. 4,510 ft.
Tuttle & Trahan No. 1 Megerle, Sur. 245. S.D. 1,060 ft.

Sarnosa—Duval County

Sarnosa Oil Corp. No. 16 Weil, sec. 130. Sd. 2,396-2,408 ft.; W.O.C.

Seven Sisters—Duval County

A. J. Brinkoeter No. 11 Garza, Sur. 212. Drlg. 2,417 ft.
Humble O. & R. Co. No. 19 Dowdy, Sur. 272. Cg. 2,402 ft.
Sun O. Co. No. 1 Rodriguez, 421.7-ac. tr., secs. 221 and 222. Drlg. 1,200 ft.
Westheimer & Daube No. 33 Campos, Sur. 224. Set csg. 2,714 ft.; W.O.C.

Sweden—Duval County

Hiawatha Oil Co. No. 2 Herberger, SW¼. Blk. 14, Agua Poquita Gr. T.D. 5,914 ft.; P.B. sd. 5,072-91 ft.; perf. 5,080-84 ft.; testing.
Hiawatha Oil Co. No. 2 Miller, sec. 24, Santos Flores Sur. R.U.
Hiawatha Oil Co. No. 3 Southland Life, Blk. 15. Drlg. 837 ft.

Thomas-Lockhart—Duval County

Thomas Est. & Lockhart No. 3-A Parr, Sur. 26. S.D. 3,971 ft.

Pearsall—Frio County

Amerada Pet. Corp. No. 1 Halff & Oppenheimer (W.O.). Old T.D. 6,312 ft.; recmtg. csg. 6,314 ft.
Amerada Pet. Corp. No. 8 Halff & Oppenheimer, S. A. Ditch Sur. 1,104 (W.O Set 7-in. protective csg. 10,341 ft.; W.O.C.
Amerada Pet. Corp. No. 1 Kothman, B. L. Crouch Sur. (W.O.). Old T.D. 4,370 ft., T.D. 5,559 ft.; fsg.
Amerada Pet. Corp. No. 4 Smith, Mason Sur. 322 (W.O.). Old T.D. 6,238 ft.; R.U.

Hords Creek—Goliad County

Brown & Wheeler No. 1-D Kaufman, Trevino Sur. Set csg. 4,454 ft.; W.O.C.

Darst Creek—Guadalupe County

L. D. Denman No. 1 fee, Arrington Sur. Drlg. 1,437 ft.
La Jita Corp. No. 5 Denman, Arrington Sur. R.U.

Manford—Guadalupe County

J. K. Blackmor No. 1 Appling, J. Hodges Sur. S.D. 240 ft.

Zoboroski—Guadalupe County

Donan et al No. 1 State, 30-ac. tr., on bank Guad. River. Set csg. 2,159 ft.; fsg.
Ogden & Reed No. 1 Hoffman, G. DeWitt Sur. T.D. 2,497 ft.; stdg.
W. J. Walton No. 4 Hoffman, DeWitt Sur. Swbg. oil 2,433 ft.

Samfordyce—Hidalgo-Starr Counties

Dean Bros. No. 1-C George, 20-ac. tr., Sh. 13, Porc. 41. Drlg. 2,683 ft.
Ralph E. Fair No. 3 Flores, 30-ac. tr., Tr. 250, Porc. 38. S.D. 3,202 ft.; prep. P.B.
Val Tex Oil Co. No. 1 Chapa, Tr. 250, Porc. 39. T.A.

LaBlanca—Hidalgo County

Atlantic Ref. Co. No. 1, Blk. 214. Set 10¾-in. csg. 1,720 ft.; W.O.C.
Dee. Davenport No. 1 Swallow, Blk. 215. Drlg. sdy. sh 4,000 ft.
Fohs Oil Co. No. 1 Harding, Blk. 89. Loc.

Randado—Jim Hogg County

Magnolia Pet. Co. No. 43 M. S. Banks, Sur. 151. Cg. 1,416 ft.

Armagosa—Jim Wells County

Tom Graham No. 1 Earhart, John Suggs Sur. T. D. 4,000 ft.; set csg. 3,170 ft.; perforating for prod.

Bentonville—Jim Wells County

Camp Prod. No. 1 Bird, Sh. 7-A, Abajo Gr. D.&A. 5,746 ft.
Camp. Prod. Co. No. 2-B Pope, N½, sec. 13, King Farm Lots. S.D. 500 ft.
Texon Drlg. Co. No. 2 Ralston, 990 ft. N line, 330 ft. W. line, sec. 17. Drlg. 5,967 ft.

Sandia—Jim Wells County

Geo. E. Smith No. 1 Wade ranch, Lot 1, Blk. "B," Bode Subd. Set 7-in. csg. 5,212 ft.; perf. 5,160 ft.; comp.; 62 B.P.D. on 5/32-in. ck.; T.D. 5,701 ft.

West Premont—Jim Wells County

C. G. Glasscock No. 2 Ritter, Lot 36, sec 76. T.D. 2,358 ft.; shut in; comp. 12 bbls. oil, 750 bbls. fresh wtr. per day.
Graham & Gilcrease No. 2-D Bennett, Lots 49 and 64, sec. 77. Oil sd. 2,248-53 ft.; set csg. 2,244 ft.
Graham & Gilcrease Oil Co. No. 2-B Laughlin, sec 77. Tstg. 3,317 ft.; S.G.
Graham & Gilcrease No. 4 Laughlin, Lot 94 and 99, sec. 77. Sd. 3,357-71 ft.; clg. in pits.
Homer Presnall No. 1 Haufbauer, Lots 22 and 27, sec. 72. Sd. (cor.) 3,480-94 ft.
Trio Oil Co. No. 1 Laughlin, Lots 33 and 48, sec. 77. Sd. 2,241-46 ft.; set csg. 2,235 ft.

North Pettus—Karnes County

Magnolia Pet. Co. No. 15 Porter, B.&B Sur. 25. Sd. 3,693-3,705 ft.; set csg; W.O.C.

Kingsville—Kleberg County

Buchanan Drlg. Co. No. 11 Dennett, C SE¼, Lot 18, sec. 88. Cg. wtr. sd. 2,857 ft.

Oakville—Live Oak County

Ohio Fuel Oil Co. No. 2-A Rosebrock, L. Romero Sur. Set csg. 507 ft.; W.O.C.

Calliham—McMullen County

Wm. Howard No. 8 Claunch, Hely Sur. Sd. 1,053-63 ft.; fsg. for bailer.

Ezzell—McMullen County

E. M. Jones No. 7 Ezzell, sec. 20. Sd. 1,501-08 ft.; completing.

Jacob—McMullen County

Loma Oil Co. No. 8-B Jacob, Sur. 13. R.U.
National Pet. Co. No. 4-C Lark, Scrugham Sur., Blk. 129. Drlg. sh. 887 ft.

Loma Alta—McMullen County

Humble O. & R. Co. No. 2 Atkinson, Deen Sur. No. 13. R.U.
J. T. Lanier No. 1 Hagist, SE¼, N½, Sur. 481. Drlg. 445 ft.

North Jacob—McMullen County

F. D. Salter No. 2 Griffith, Osborn Sur. Fsg. 940 ft.

Agua Dulce—Nueces County

United Prod. Co. No. 1 Harvey, 1,100 ft. W line, 1,050 ft. N line, tr., M. Garza Sur. Set 5½-in. csg. 7,457 ft.; perf. csg. 7,375-84 ft.; flwg. 112 B.P.D. fluid, reported 25 to 30% oil, remainder S.W.; T.D. 9,003 ft.; squeeze job; to reperf.
United Prod. Co. No. 3-A Rivers, sec. 9, Peters Subd. Drlg. 921 ft.

Chapman Ranch—Nueces County

Seaboard O. Corp. No. 6 Collins, sec. 38, Laureles Farm Tracts. Drlg. 3,515 ft.

Clara Driscoll—Nueces County

Magnolia Pet. Co. No. 4 Sevier, 80-ac. tr., R. Russell Sur. Drlg. 3,057 ft.

Flour Bluff—Nueces County

Humble O. & R. Co. No. 1 Brett & Secrist, Lot 2, sec. 48. T.D. 6,662 ft.; cementing csg.
Humble O. & R. Co. et al No. 1 Bracht & Webb, Lot 7, Blk. 47. Drlg. sh. 5,550 ft.
Humble O. & R. Co. et al No. 1 Collins, Lot 29, Blk. 48. Drlg. sh. 6,670 ft.
Humble O. & R. Co. et al No. 1 Downie & Surber, Lot 17, Blk. 48. Set csg. 6,664 ft.; W.O.C.
Humble O. & R. Co. et al No. 1 Duncan, Lot 6, sec. 41. T.D. 6,663 ft.; flg. in pits.
Humble O. & R. Co. et al No. 2 Ritter, Blk. 55. Drlg. sn. 6,405 ft.
Humble O. & R. Co. No. 3 Robertson, Lot 11, Blk. 56. D.S. testing 6,669 ft.

London—Nueces County

Atlantic Ref. Co. No. 1 Stockton, SW¼, sec. 12. Drlg. 4,993 ft.

Saxet Heights—Nueces County

Wm. Brady No. 1 Whelan, 56.9-ac. tr., Villareal Sur. Sd. 4,025-50 ft.; drlg. plugs.
Harrison Drlg. Co. No. 2 Whelan, Villareal Sur. Oil sd. 4,059-64 ft.; set csg. 4,068 ft.; stdg.
H. M. Reed No. 2 Quinn, 28-ac. tr., Villareal Sur. Perf. csg. 4,072-76 ft.; T.D. 4,120 ft.; installing flow valves.
H. M. Reed No. 3 Quinn, 28-ac. tr., Villareal Sur. Drlg. 2,338 ft.
Roosth & Genecov No. 1 Rose, Lot 9, Blk. 11, Villareal Gardens. Drlg. 3,763 ft.
Ben F. Smith No. 1 Snowden, 13-ac. tr., Villareal Sur. R.U.

Saxet—Nueces County

C. Andrade No. 6 Frank, 28-ac. tr., Sur. 500. Drlg. 6,607 ft.
Baltic Drlg. Co. No. 6 Harmon, Sur. 416. Sd. 6,300 ft.
Bentex Drlg. Co. No. 4 Harmon, 50-ac. tr., Sur. 416. T.D. 6,369 ft.; making electrical sur.
R. B. Bryant No. 1 Cox & Cryder, 20-ac. tr., Gallagher Sur. 166. Spdg.
R. B. Bryant No. 2 Frank, Sh. "C," Sur. 416. (W.O.). Stdg. 5,831 ft.
R. B. Bryant No. 6 Harmon, Sur. 416. Cg. 6,871 ft.
Crown Central Pet. Corp. No. 8-B Morgan, 80-ac. tr., Sur. 315. Sd. 4,455-60 ft.; set csg.; W.O.C.
Crown Central Pet. Corp. No. 4 Page, 75-ac. tr., Page Lds. Sur. Sd. 4,852-62 ft.; set csg.; W.O.C.
Donico Prod. Co. No. 7 Donnigan, 60-ac. tr., sec. 7, Rge. 6. Set 16-in. csg.; W.O.C.
Donico Prod. Co. No. 10 Donnigan, 80-ac. tr., sec. 7, Rge. 6. Sd. 4,550-55 ft.
Floboots Oil Co. No. 1 Bliss, 25-ac. tr., Stevens Tr. Set csg. 6,964 ft.; perforating.
Floboots Oil Co. No. 4 Humphries, Stevens Sur. W.O.; old T.D. 5,840 ft.; set csg. 6,982 ft.; W.O.C.
Gilcrease Oil Co. No. 3 Sullivan, 140-ac. tr., Gallagher Sur. Perf. 3,847-52 ft.; comp. 112 B.P.D.
L. Glasscock No. 2-B Johns, 20-ac. tr., MacGregor Sur. 582. Sd. 4,855-65 ft.; set csg.; rng. tbg.
Tom Graham No. 5 Harmon, 34-ac. tr., Sur. 416. R.U.
Hiawatha Oil Co. No. 7 Griffith, 100-ac. tr., Sur. 416. T.D. 7,230 ft.; set 5½-in. csg. 5,580 ft.
Hiawatha Oil Co. No. 10 Hutchins-Stillwell, Blk. 34, Sheppard Farm Lots. Sd. 4,866-75 ft.; set csg.; W.O.C.
Hiawatha Oil Co. No. 3-B Smith, Blk. 35, Sheppard Farm Lots. Perf. 5,810-16 ft.; comp. 140 B.P.D. on 5/32-in. choke.
Hiawatha Oil Co. No. 5-A Smith, Blk. 35, Sheppard Farm Lots. Fsg. 4,830 ft.
Houston Oil Co. No. 4-A Harrell, Blk. 28, Sheppard Farm Lots. Cg. 4,390 ft.
Houston Oil Co. No. 23 Morgan, sec. 7,

LEGAL

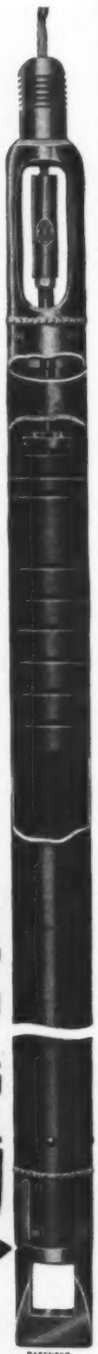
Department of the Interior, U. S. Land Office, Las Cruces, New Mexico. Notice is hereby given that the W½ NW¼ Sec. 17, and the E½ NE¼ Sec. 18, T. 17S., R. 31E, N. M. P. M., containing 160 acres, in the Jackson producing oil and gas field, are offered in a single unit to the qualified bidder of the highest amount offered per acre, the minimum bid being $25 per acre, as a bonus for the privilege of leasing the land under section 17 of the mineral leasing act of August 21, 1935 (49 Stat. 674), at the sliding royalty rate scale in the standard lease form on page 6 of Circular 1386, at the sale to be held in the United States Land Office at Las Cruces, New Mexico, at 10 o'clock A. M., on June 25, 1937. The successful bidder must deposit on the date of the sale with the officer in charge of the sale, a certified check on a solvent bank or cash, for one-fifth of the amount bid by him, and file the showing of qualifications to receive a lease required by section 7 of said Circular 1386. Bidders are warned against violations of the provisions of section 59, U. S. Criminal Code, approved March 4, 1909, prohibiting unlawful combination or intimidation of bidders. The right is reserved to reject any and all bids at the discretion of the Secretary of the Interior. Register.

Your WELLS

NEED CLEANING TOO!

Sand and sediment is holding back your oil—clean it out quickly with the MILLER Sand Pump and get more oil at small cost.

The MILLER is made in diameters of 2½, 3, 3½, 4, 4½, 5, 5½, 7 and 9 inches and lengths of 20, 25 and 30 feet. 5/32-inch wall thickness in REGULAR Type. ¼-inch wall tubes HEAVY Type Sand Pumps.



INTERCHANGEABLE BOTTOMS
To Meet Every Condition

- **BAILER BOTTOM** — With the Bailer Bottom installed the MILLER is quickly changed to a Bailer giving you a combination of either Bailer or a Sand Pump in one tool.
- **SAND BOTTOM** — Used when tools are run and when well is shot to quickly remove loose material.
- **STAR BOTTOM** — Used for cutting the sand lines.
- **CHISEL BOTTOM** (In Pump) — With this bottom tightly packed sand can be easily broken in small pieces so it can be picked up in the pump.

Write for Descriptive Folder and Price List

See Page 1186 COMPOSITE CATALOG

PATENTED NO. 1370340 NO. 1523604 NO. 1787350 NO. 1962626 NO. 1966626 NO. 2055667

MILLER Sand Pump Co.

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OKLAHOMA CITY, OKLA., U. S. A.

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SAPULPA, OKLA. and KILGORE, TEX.

FOR SALE BY SUPPLY STORES EVERYWHERE

Rge. 5. Drlg. plug. 4,425 ft.; making potential test.

Houston Oil Co. No. 26 R. Morgan, 493.63-ac. tr., sec. 7, Rge. 6. Oil sd. 4,418-23 ft.; comp. 188 B.P.D. on 5/32-in. choke.

Houston Oil Co. No. 27 Morgan, sec. 7, Range 6. R.U.

Houston O. Co. No. 6 Walton, Villareal Sur. Set csg. 964 ft.; W.O.C.

H. H. Howell No. 5 Hutchins, 80-ac. tr., Sur. 416. Sd. 6,898-6,911 ft.; set csg.; perf. 6,698 ft.; testing.

H. H. Howell No. 3 Morgan sec 415. Set csg. 7,000 ft.; T.D. 7,001 feet.; D.&A.

H. H. Howell No. 4 Morgan, sec. 415. Set surf. csg. 1,000 ft.; W.O.C.

H. H. Howell No. 2 Plachey, Sur. 25. Sd. 4,174-86 ft.; Comp., no gauge.

Kepley Prod. Co. No. 4 Donigan, 100-ac. tr., sec. 7, Rge. 6. Sd. 4,545-60 ft.; set csg. 4,591½ ft.; comp. 203 B.P.D. on ½-in. choke.

Morgan & Chapman Minerals Corp. No. 7 Morgan, NE¼, Sur. 405. Sd. 6,690-6,708 ft.; tstd. oil; set csg.; perf. 6,700-03½ ft.; completing.

Pan American Prod. Co. No. 6-B Sagarin, 82-ac. tr., Sur. 500 Sd. 6,726-50 ft.; rng. screen. Comp. 123 B.P.D.

Phillips Pet. Co. No. 1 Frank, 27.5-ac. tr., Sur. 500. Set csg. 5,864 ft. Perf. 5,775-78 ft. Completing.

Phillips Pet. Co. No. 3 Perkins-LaGasse, 40-ac. tr., Stevens Sur. A-406. Drlg. 5,-447 ft.

Port O. & G. Co. No. 3 Cox & Cryder Sd. 3,814-28 ft.; set csg. 3,851 ft.; stdg.

Potter & Snowden No. 2-A Kocurek, 26-ac. tr., Sur. 25. Perf. 3,843-48 ft.; Comp. 100 B.P.D. on ¼-in. ck. Sd. 3,-834-48 ft.

Potter & Snowden No. 1 Taggert, Blk. 5, Sur. 401. S.D. 6,004 ft.; M.I.M.

Renwar & Maryland No. 1-A Rand Morgan, Sur. 415. O.W.W.O.; old T.D. 5,-825 ft. Sd. 6,687-92 ft. Tested high grav. oil Drlg. ahead 6,740 ft.

Republic Nat. Gas Co. No. 3-A Morgan, sec. 405. Drlg. 1,780 ft.

Richardson Pet. Co. No. 18 Cain & Secrist, Lot 23, Russell Farm Trs. Sd. 4,-449-57 ft.; perf. 4,448-52 ft. Comp. 247 B.P.D. on 5/35-in. Ck.

Richardson Pet. Co. No. 2 Erwin, Sur. 500. Drlg. 6,511 ft.

Richardson Pet. Co. No. 6 Sedwick, 185.47-ac. tr., Sur. 311. Set csg. 4,806 ft. W.O.C.

Richardson Pet. Co. No. 7 Sedwick, 124-ac. tr., Sur. 311. Drlg. 4,411 ft.

Richardson Pet. Co. No. 9 Sedwick, Dunn Sur. 312 R.U.

Richardson Pet. Co. No. 11 Quiros, Sur. 311. Sd. 5,820-35 ft., set csg. W.O.C.

Shell Pet. Corp. No. 5 Flato, Blk. 3, Sheppard Farm Lots. Drlg. 1,631 ft.

Southern Minerals Corp. No. 3 Elder, 60-ac. tr., Surs. 311 and 312. Sd. 4,873-77 ft.; set csg. Comp. 130 B.P.D. on 5/32-in. ck.

Southern Minerals Corp. No. 4 Elder, 60-ac. tr., Villareal Gr. R.U.

Southern Minerals Corp. No. 6 Isensee, Sur. 404; (W.O.). R.U.; old T.D. 6,290 ft. washing to bttm.

Southern Minerals Corp. No. 2 Stillwell, 60-ac. tr., 122-ac. tr., Sur. 311. R.U.

Texon Drlg. Co. No. 7 Carter-Ocker-Till. 200-ac. tr., Sur. 316. Cg. 4,452 ft.

Texon Drlg. Co. No. 7 Kocurek, 156-ac. tr., Sur. 316. T.D. Sd. 4,444 ft. Comp. 126 B.P.D. on 5/32 in. ck.

Texon Drlg. Co. No. 6 Ocker, 174.21-ac. tr., Surs. 402 and 316. Drlg. 3,021 ft.

Texon Drlg. Co. No. 7 Ocker, 160.77-ac. tr., Sur. 316. T.D. 4,400 ft. Comp. 136 B.P.D. on 3/16 in. ck. T.D. 4,580 ft.

Texon Drlg. Co. No. 9 Ocker, Sur. 402. Sd. 4,442-48 ft. Set 7-in. csg. 4,441 ft. W.O.C.

Sullivan—Nueces County

Lockhart et al No. 1 O. Purl, Lot 2, sec 7, Ross Peters Subd. No. 2. Cg. 6,489 ft.

Midway—San Patricio County

Phillips Pet. Co. No. 1 Ivey, 990 ft. E line, 344 ft. S line, sec. K. Oil sd. 5,335-46 ft.; set csg.; reperf. 5,340-42 ft. Cleaning into pits, 40 B.P.D.; fluid 50%; oil 50% w. wtr.

Plymouth—San Patricio County

Plymouth Oil Co. No. 76-C Welder, sec. 70. Set csg. 5,645 ft. W.O.C.

Plymouth Oil Co. No. 77-C Welder, sec. 71. Set csg. 5,643 ft.; W.O.C.

Taft Field—San Patricio County

Humble O. & R. Co. No. 24 Mayo, Ottman. Sur. Set csg. 4,365 ft. W.O.C.

White Point—San Patricio County

Pan American Prod. Co. No. 1 White Point Dev. Co., 100-ac. tr., Wm. Bell Sur. Drlg. 1,787 ft.

Barbacoas—Starr County

K. E. Merren No. 1-A S.C.C.C., Blk. 34, Lambeth Subd., Porc. 89. Set csg. 5,-417½ ft.; shut in; W.O. equip.; C.I.C.P. 2,560 lbs.; flowed 25 B.P.D. dist. on 5/32 in. ck.

Los Olmos—Starr County

St. Marys O. & G. Co. No. 2-E Kelsey-Bass, Blk. 8, Porc. 76. D.&A. 380 ft.

Ricaby—Starr County

Carter-Stiernberg No. 1 Vela, Lot 1, Blk. 4, El Tanque Subd., Porc. 84. Drlg. 939 ft.

South Ricaby—Starr County

Dodd, Trs., No. 3 Wood Est., Porc. 84. Comp. 20 B.P.H. on ¼-in. ck. T.D. 1,-756 ft.

Sioux Oil Co. No. 4 Ricaby. Porc. 83. S.D. 1,472 ft.

Sun Oil Co. No. 1 Wardner Est., W2/7, Porc. 84. S.D. 1,762-75 ft. Set csg. 1,-767 ft. to deepen.

Rio Grande City—Starr County

Clopton & Reed No. 1 Green, Porc. 80. T.D. 4,600 ft.; S.G.; P.B. 1,681 ft.; set csg.; W.O.C.

Clopton & Reed No. 4 Tijerina, Lot 12, Sh. 14-C, Porc. 80. Cg. 1,423 ft.

Bruni-Cole—Webb County

Bishop Oil Co. No. 1 Bruni Est., Blk. 8, Sur. 8, Foltz Subd. Drlg. 3,217 ft.

Bridwell O. Co. No. 1 Benavides, Sur. 691. Drlg. 1,020 ft.

Cole Pet. Co. No. 100 Benavides, Sur. 412. D.&A. 2,900 ft.

J. B. Cutbirth No. 1 Bruni, Blk. 5, Sur. 8. R.U.

Highland Oil Co. No. 3-B Bruni, Surs. 7 and 8. Drlg. 1,579 ft.

O. W. Killam No. 53 Bruni, Blk. 19, Sur. 8. Comp. 150 B.P.D. on ¼-in. ck. T.D. 3,438 ft.

L. H. Pitkin No. 1 Bruni, Blk. 4, Sh. 8. Testing 3,434 ft.

Killam—Webb County

Humble O. & R. Co. No. 1 Laurel Bros., Sur. 333. Drlg. sh. 2,031 ft.

R. Killam No. 2 Garcia, Sur. 1099. S.D.; R.U.

O. W. Killam No. 2 Garcia, Sur. 1099. Sd. 2,017-18 ft.; T.D. 2,024 ft. Comp. 250 B.P.D.

O. W. Killam No. 3 Garcia, Sur. 786. R.U.

Eugene Mays No. 1 Garcia, 120-ac. tr., Sur. 786. Loc.

O'Hern—Webb County

Magnolia Pet. Co. No. 2 Benavides, Sur. 172, Garza Sur. Drlg. 2,856 ft.

Magnolia Pet. Co. No. 7 Benavides, Blk. 32, O'Hern Subd. Comp. 192 B.P.D. T.D. 2,889 ft.

Magnolia Pet. Co. No. 8 Benavides, Blk. 32, O'Hern Subd. Drlg. 521 ft.

J. J. O'Hern No. 1-D Benavides, Blk. 30, O'Hern Subd. O. Sh. 2,802-16 ft. W.O.C.

Peggy-Sue Oil Co. No. 1 Benavides, Blk. 23, Hale Subd. Comp. est. 600 B.P.D. T.D. 2,891 ft.

Starr Dev. Co. No. 1 Benavides, 330 ft. N and W lines, Sur. 173. M.I.M.

Sun Oil Co. No. 1-A Benavides, Blk. 10, Hale Subd. Drlg. 3,256 ft.

LaSal Vieja—Willacy County

Shell Pet. Corp. No. 1 Yturria, Sh. 64, Carricitos Gr. (W.O.); set csg. 7,630 ft.; T.D. 10,286 ft.; P.B. 7,735 ft. W.O.C.

Chapman-Abbott—Williamson County

Joe E. Mills No. 1 Olive, S. Miller Sur. Drlg. 2,391 ft.

Escobas—Zapata County

Earl Calloway No. 12 Bustamente, Sh. 8, Fansler Part. Comp. 35 B.P.D. Sd. 1,-195-99 ft.

Earl Calloway No. 12-A Bustamente, Sh. 8, Fansler Part. D.&A. 1,302.

E. Calloway No. 8 Garcia, Sh. 3, Fansler Part. Sd. 1,182-84 ft.; dry; S.D.

Nordan & Morris No. 22 Bustamente, Sh. 33, Fansler Part. T.D. 1,241 ft.; comp.; 32 B.P.D.

Nordan & Morris No. 23 Bustamente, Sh. 33, Fansler Part.; comp.; 30 B.P.D. T.D. 1,232 ft.

Nordan & Morris No. 24 Bustamente, Sh. 33, Fansler Part.; comp.; 32 B.P.D. T.D. 1,219 ft.

Nordan & Morris No. 25 Bustamente, Sh. 33, Fansler Part. Drlg. 1,020 ft.

Starr Dev. Co. No. 1 Garza, Blk. 34, Douglas Subd. R.U.

Texas Co. No. 100 Jennings, Cerrito Blanco Gr. T.D. 1,245 ft.; comp.; 25 B.P.D.

Texas Co. No. 101 Jennings, Cerrito Blanco Gr. Drlg. 737 ft.

E. C. TEXAS WILDCATS

Anderson County

Barnsdall Oil Co. No. 1 H. C. Swanson, R. Duty Sur., 10 mi. E of Palestine. T.A. 5,245 ft.

Humble O. & R. Co. No. 1 Mrs. S. Hassell, 450 ft. N and W of 80-ac. tr., J. Beard Sur., 2 mi. N of Jarvis. Loc.

Bowie County

Chew & Basset No. 1 Barkman. Drlg 2,-600 ft.

Ferguson & Hill No. 1 Breckenridge. Cg. 2,782 ft.

Sutton & Hawkins No. 1 McDuffie, John Ball Sur., 3 mi. NE of New Boston. Drlg. 5,553 ft.

Woodley & Bently No. 1 Lumpkin. Drlg 4,249 ft.

Falls County

H. H. Bell et al No. 1 A. Garrett, J. M. Sanches Sur. Drlg. 1,477 ft.

E. B. Collard et al No. 1 P. Neikamp, W. Hampton Sur., 3 mi. E of Lott. S.D. 280 ft.

Fannin County

Joiner-Owens No. 1 Dr. Grey, Alex Russell Sur., 4½ mi. of Monktown. S.D. 410 ft.

Freestone County

C. E. Rossiter No. 1 J. P. Fulton in J. P. Fulton Sur., 2½ mi. E of Donie. S.D. 956 ft.

Stroude et al No. 1 P. Mullens, R. D. Sloar Sur., 6 mi. NE of Fairfield. T.D. 341 ft.

Henderson County

R. J. Paschal No. 1 H. M. Wilson, Thos. Caro Sur., 4½ mi. N of Malakoff. Loc.

Tide Water Assoc. et al No. 2-C McElreath & Suggett. W. P. Wyche Sur. Austin chalk 3,750-4,160 ft.; drlg. 4,-247 ft.

Hill County

A. N. Mabry No. 1 M. Holderman, C. Sullivant Sur., 1 mi. S of Mt. Calm. S.D. 680 ft.

Hopkins County

J. Carpenter Oil Co. No. 1 Gillis, between Brashear and Cumby, W. A. Smith Sur. S.D. 3,715 ft.

Houston County

American Liberty Oil Co. No. 1 W. L. Moody, S. E. Parker Sur., 1½ mi NW of Grapeland. S.D. 6,033 ft.; D.S.T. showed 1,500,000 ft. gas, through ¾-in. ck.

Hunt County

Stanolind O. & G. Co. No. 1 J. P. Hawks R. Ragsdale Sur., near Campbell. Top Paluxy 4,383 ft.; top Glen Rose 4,815 ft.; top anhydrite 5,335 ft.; base massive anhydrite 5,560 ft.; Travis Peak 5,-965 ft.; T.D. 6,570 ft.; rmg. hole.

Limestone County

Pure Oil Co. No. 16-T Kendrick, P. Varella Sur., Mexia field. Top Georgetown 3,365 ft.; Glen Rose 4,270 ft.; drlg. 4,954 ft.

Red River County

Roy I. Carter Drlg. Co. No. 1 J. A. Tutt, C 40-ac. tr. in D. Hart Sur., 2 mi. S of Avery. S.D. 410 ft.

Rusk County

Barnett Pet. Corp. No. 1 S. C. Sanford, W. A. Corder Sur., 10 mi. E of Mt. Enterprise. Georgetown 3,275 ft.; drlg. 3,800 ft.

General Crude and others No. 1 Bivins Est., R.U. R. Williams Sur., 6 mi., N of Latum. Fsg. 920 ft.

J. Merrick et al No. 1 Tipps, T. Uzzell Sur., 6 mi. S of East Texas field. Pecan 2,910 ft.; drlg. 3,147 ft.

Nivola O. Co. No. 1 Citizens Natl. Bank, M. D. Carmel Sur. 2½ mi. SE of Henderson. Loc.

J. W. Shipman et al No. 1 Citizens Bank, J. J. Y'Barbo Sur., 4 mi. NE of Henderson. S.D. 4,340 ft.

Upshur County

F. W. Maddox No. 1 S. T. Buie, J. M. Dunn Sur., 4 mi. E of Gilmer. Austin 3,629 ft.; top Woodbine 3,717 ft.; top sd. 3,-751 ft.; 2 ft. fine-grained oil sd.; S.D.

Van Zandt County

Humble O. & R. Co. No. 1 L. K. Riggs, W. Daniels Sur. Skidded 100 ft.; top Austin 2,805 ft.; top Georgetown 3,675 ft.; drlg. 4,764 ft.

EAST TEXAS

(Border Counties)

Bowie County

Sutton & Hawkins No. 1 D. L. McDuffey, John Bell Sur. Drlg. 5,210 ft.

Ferguson & Hill No. 1 A. V. Breckenridge, Nancy Dycas Sur. T.D. 2,731 ft.; D.S.T. showed mud and show oil.

Woodley & Bentley No. 1 J. D. Lumpkin, J. McDermott Sur. Drlg. 4,122 ft.

Cass County

American Lib. Oil Co. No. 2 E. T. Tyson, Cass Sch. Ld. Sur. Drlg. 5,330 ft.

G. H. Chamblee No. 1 Collett, J. S. Smith Sur., 20-ac. tr. Drlg. 3,690 ft.

Gulf Prod. Co. No. 1 W. T. Henry, H. Owens Sur., NW cor. Sur. Drlg. 5,740 ft.

P. L. Hoffman No. 2 Davis, J. S. Smith Sur. Rng. Comp.; flw. 30 B.P.H.; T.D. 6,015.

Magnolia Pet. Co. No. 7 W. M. Hall, J. N. Jackson Sur. 10-in. cmt. 2,007 ft.; W.O.C.S.

Magnolia Pet. Co. No. 18 L. Haywood, P. Evans Sur. T.D. 6,031; tstg.

Magnolia Pet. Co. No. 19 L. Haywood, P. Evans Sur. Comp.; flw. 584. B.P.D.; T.D. 6,032.

Magnolia Pet. Co. No. 20 L. Haywood, P. Evans Sur. Drlg. 5,730 ft.

Magnolia Pet. Co. No. 21, L. Haywood, P. Evans Sur. 7-in. 5,996; T.D. 6,028; W.O.C.S.

Magnolia Pet. Co. No. 22 L. Haywood, P. Evans Sur. Comp.; flw. 504 B.P.D.; T.D. 6,005.

R. W. Norton No. 5 Davis, H. Holbert Sur. Drlg. 5,656 ft.

R. W. Norton No. 1 L. E. Hardin, Dudley Gilleans Sur. 6-in. cmt. 5,949; T.D. 6,-000 ft.

R. W. Norton No. 5 J. T. Moore, J. S. Smith Sur. Drlg. 4,990 ft.

Ohio Oil Co. No. 19 R. P. Willis, S.F.I.W. Sur. Drlg. 2,210 ft.

W. G. Ray Drlg. Co. No. 1 Parker, G. Crowder Sur. Comp.; flw. 231 B.P.D.; T.D. 6,050.

W. G. Ray Drlg. Co. No. 2 Parker, G. Crowder Sur. R.U.

Texas Co. No. 1 Chatten, Wm. R. Myers Sur. S.D. for tankage; T.D. 5,996.

Texas Co. No. 8 McLeod, W. A. Elliott Sur. Comp.; flw. 51 mi. gas; T.D. 6,-111 ft.

Texas Co. No. 3 N. A. Rambo, Cass Cty. Sch. Ld. Sur. 7-in. cmt. 5,997; T.D. 6,-012.

Texas Co. No. 4 N. A. Rambo, Cass Cty. Sch. Ld. Sur. Drlg. 5,900 ft.

N. K. Towns No. 1 Henry, H. Owens Sur. NW cor. Sur. Comp.; flw. 325 B.P.D.; T.D. 5,960 ft.

United Gas No. 2 V. C. Bivens, J. Collom Sur. Comp.; flw. 16 B.P.H.; T.D. 6,005.

United Gas No. 1 Threwer, J. S. Smith Sur. 7-in. cmt. 6,038; T.D. 6,046.

United Prod. No. 2 Allday, 87-ac. tr. Drlg 4,440 ft.

United Prod. No. 6 Baugus Unit, R. Trammel Sur. T.D. 5,920; tstg.

United Prod. No. 2 Belote, H. Holbert Sur. T.D. 6,005; rg. 7-in.
United Prod. No. 2 J. Q. Clements, Wm. B. Hughes Sur. Gas well; hold for gauge.
United Prod. No. 1 W. W. Herner, J. S. Smith Sur., on 14-ac. tr. 7-in. cmt. 5,-980; T.D. 5,998.
United Prod. No. 1 M. R. Lennard, J. S. Smith Sur., on 17-ac. tr. 7-in. cmt. 5,-987; T.D. 6,000.

Harrison County

Geyer Oil Co. No. 2-B Vincent Davenport Sur. T.D. 2,392 ft.; W.O.S.R.

Marion County—Rodessa

Arkansas-La. Gas Co. No. 1 Allen Houston, A. D. S. Coy Sur. Drlg. 3,916 ft.
Arkansas-Louisiana No. 1 C. C. Braden T. Hanson Sur. Cg. 6,674 ft.
Fohs Oil Co. No. 1 Mary Reynolds, A. D. S. Coy Sur. Drlg. 3,000 ft.
Hunter Co. No. 2 Fonda, A. D. S. Coy Sur. Drlg. 4,350 ft.
Mid-Continent Pet. Corp. No. 1 Sory, A. D. S. Coy Sur. Drlg. 1,820 ft.

Panola County

Glassell & Glassell No. 1 Pierce & Chesbro, Julia Soape Sur. Drlg. 4,740 ft.
Magnolia Pet. Co. No. 2 E. A. Hull, Thos. Applewhite Sur. 9-in cmt. 6,001; prep. drl. plug.

Shelby County

Wm. Redditt No. 1 Pickering Lbr. Co., SE cor. Stephens English Sur. 7-in. cmt. 4,079 ft. prep. test.

NORTH TEXAS WILDCATS

Archer County

O. P. Darsey No. 1 J. T. Longley, sec. 1839, T.E.&L. Sur. Drlg. 880 ft.
J. T. Miller No. 1 J. M. Bloodworth, M. Cartwright Sur. A-60. Drlg. 1,025 ft.

Clay County

L. T. Burns No. 1 Sanzenbacker, L. N. Sparks Sur. A-401. 6⅝-in. cem. 3,900 ft.; O.S. 3,901-07 ft.; Bailed dry. D.D. with tools.
Foster Minerals Corp. No. 1 V. H. Yarbrough M. Lassiter Sur. A-288. Drlg. 2,410 ft.
Green Mt. Oil Co. No. 1 Staggs, sec. 34, A.C.S.L. Sur. Whipstocking 2,900 ft.

Collin County

F. Jones No. 1 Sherley, G. Morrison Sur. S.D.O. 3,003 ft.

Cooke County

V. E. Powell No. 1 D. B. Allred, G. DeLos Santos Sur. A-894. 6⅝-in. Cem. 3,537 ft. W.O.C.
J. G. Richards et al No. 1 J. A. Yosten, T. Scott Sur. A-90. Fishing 4 jts. pipe.
Whitfield, Pearson & Grimes No. 1 C. F. Bundy, P. P. Cary Sur. A-1239. Testing S.S.O. 2,150-55 ft.
Texas Co. No. 1 J. F. Marshall, A. Burns Sur. A-49. Drlg. 3,345 ft.

Denton County

California Ref. Co. No. 1 W. & S. Life Ins. Co., B.B.B.&C. Sur. A-783. S.S.O. 1,461-65 ft. S.D.O.
Oil Finance No. 1 J. S. Gambill. S.D.O. 2,380 ft.
A. A. Lander No. 1 Gibson, O. Wilcox Sur. A-1404. Testing S.S.O.&G. 1,597-1,600 ft.
Manning & Moore No. 1 Dora Ratchford, J. Walters Sur. S.D.O. 2,100 ft.
Regan & Davis No. 1 Williams, M.E.P.&P. Sur. A-927. Cem. surf. pipe and S.D.O.

Foard County

O. P. Burnham No. 1 Ward, sec. 21, H.& T.C. Sur., Blk. 8. U.R. 6-in. 1,425 ft.

Grayson County

Denver P. & R. Co. No. 1 McMenamy, J. Hertzog Sur. A-528. Drlg. 2,700 ft.
North Texas Oil Co. No. 1 A. M. Smith, R. M. Williamson Sur. A-1300. S.D.O. 370 ft.

Jack County

F. S. Freeland No. 1 R. E. Graves, S. Hazel Sur. A-258. R.U.C.T.
Hill & Hill No. 1 W. O. Hickman, T. M. League, A-348. Loc. 3,500 ft. test.
H. B. Madden No. 1 J. L. Mask, sec. 2708, T.E.&L. Sur. Sdy. L. 1,829-35 ft.; tstd. dry; S.D.O.
O. J. Murray No. 1 W. J. Easterly, J. Helenstutter Sur. A-1269. S.D.O. 110 ft.
Tebey & Leberman No. 1, SE of Rankin, J. P. Thomason Sur. A-1437. Spud. and S.D.
R. A. Westbrook No. 1 Worthington-Knox, B.B.B.&C. Sur. A-185. S.D.O. 1,-560 ft.

Knox County

Denver P. & R. Co. No. 1 Waggoner, sec 90, H.&T.C. Sur., Blk. E. Drlg. 2,750 ft.

Montague County

Benton & Holmes No. 4 Reed A. T. Robinson Sur. O.W.D.D.; B.O.S. 2,320-28 ft.; set 5-in. csg.; C.O. and tstg.; est 10 B. P.H. P.O.P.
Moss Holmes No. 1 I. N. Monroe, F. Secrest Sur. A-665. S.D.O. 2,500 ft.
Lesh & McCall No. 1 Dodson, T. B. Jackson Sur. A-394. S.S.O. 3,145-53 ft. Tested S.W.; S.D.O.
J. W. Sorrell et al No. 1 J. E. Walthall, S. H. Smith Sur. A-662. S.D. 2,000 ft.
Ventex Investments, Ltd., No. 1 S. E. Bell, sec. 11, M.E.P.&P. Sur. Re-legging derrick 3,220 ft.

Wichita County

Morgen & Anderson No. 1 C. A. Mertins, sec. 2, G.C.&S.F. Sur. Drlg. 1,575 ft.
D. G. Parker No. 1 fee, sec. 22, P.P.C.S.L. Sur. A-241. Drlg. 1,100 ft.
Perkins & Cullum No. 1 T. L. Burnett A. sec. 1, T.&.N.O. Sur. A-316. Drlg. 1,520 ft.

Wilbarger County

King Oil Co. No. 1 Waggoner V, sec. 107, H.&T.C. Sur. Drlg. 2,140 ft.
F. A. Lain No. 1 J. Coffee, sec. 44, H.&T.C. Sur. Drlg. 6,610 ft.
W. W. McDonald No. 3 Waggoner A. sec. 26, H.&T.C. Sur. Testing lime 3,638-3,640 ft.
C. C. Wilson No. 1 W. T. Waggoner, Geo. Butler Sur. A-3. Testing O.S. 1,099-1,-110 ft.

Wise County

Latex Oil Co. No. 1 C. R. Smith, J. Couch Sur. A-104. S.D.O. 2,165 ft.; derrick pulled in.

Young County

F. W. Bennett No. 1 R. V. Tidwell, J. L. Blackwood Sur. A-1378. Running 6⅝-in. 3,230 ft.
H. J. Cox No. 1 W. T. Donnell, J. M. Smith Sur., sec. 1-7-1879. S.D.O. 1,810 ft.
Hickok et al No. 1 A. P. Martin, V. H. Twilliger Sur. A-1883. Drlg. 1,740 ft.
Lupton & Long No. 1 W. I. Gilmore, J. Gilmore Sur. A-2135; R.U.C.T.
Pitzer & West No. 1 Norton "B", sec. 615 T.E.&L. Sur. Drlg. 1,200 ft.
I. G. Shaw Oil Corp. No. 1 J. L. McLaren sec. 6, B.B.B.&C. Sur. A-29. T.D. 3,000 ft.; P.B. to test S.S.O. 2,929-70 ft. S.D.O.
H. Zweifel No. 1 E. S. Graham, B.S.&F. Sur. A-44. Drlg. 3,000 ft.
H. Zweifel No. 1 R. D. Sewell, M. Case Sur. A-1402. Drlg. 3,550 ft.

WEST TEXAS WILDCATS

Andrews County

Amerada Pet. Corp. No. 1 L. Liopman, sec. 6, Blk. A-29, P.S.L. Sur. Drlg. 2,-545 ft.
W. G. Blanchard et al No. 1 Cox, C SW sec. 4, Blk. A-30, P.S.L. Sur. W.O.C. 1,605 ft.
M. S. Forgeron et al No. 1 Lockhart & Brown, C NE¼ sec. 20, Blk. A-41, P.S.L. Sur. R.U.
Sinclair Prairie Oil Co. No. 1 Emma Cowden, sec. 11, Blk. 44, Twp. 2n, T.&P. Sur. Drlg. 3,975 ft.
Hargrove et al No. 1 Riordan, NW¼, sec. 10, Blk. A-44, P.S.L. Sur. Drlg. 2,-000 ft.
Humble O. & R. Co. No. 2 Walker, sec. 6, Blk. A-43, P.S.L. Sur. M.I.R.
Landreth Prod. Co. No. 1 L. Jones, sec. 11, Blk. A-42, P.S.L. Sur. Fsg. 4,416 ft.

Bailey County

Etz & Robinson No. 1 Enochs, Tract 66, League 182, Floyd Co. School Lands Sur. R.U. mach.
E. L. Wilson et al No. 1 Yellow House Land Co., Labour 4, Abner Taylor Lge. 700. Elev. 3,687 ft.; T.D. 4,497 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd., sec. 66, Blk. 10, G.H.&S.A. Sur. Drlg. 4,410 ft.
Storey No. 1 Wilson, sec. 3, Blk. 212, T.& St.L. Sur. S.D. 2,250 ft.

Cochran County

Englewright & Fogelson No. 1 Houston. Drlg. 2,970 ft.
Pete Wiggins et al No. 1 C. Slaughter Dean, C Lab. 26, League 92, Lipscomb Co. School Ld. Loc.

Coke County

H. E. Ogden et al No. 1 Rawlins, sec. 390, Blk. 1-A, H.&T.C. Sur. S.D. 515 ft.
Plymouth Oil Co. No. 1 Mrs. Mary Hanna, sec. 252, Blk. LA, H.&T.C. Sur., 1½ mi. SW of Blackwell. Fsg. 2,995 ft.

Crane County

Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. Drlg. 5,412 ft.

Crockett County

R. H. Henderson No. 1 C. B. Haun et al. Machine.
Superior Oil Co. of Calif. No. 1 J. S. Todd, C SE¼ sec. 55, Blk. UV, G.C.&S.F. Sur. S.D. 6,388 ft.

Dawson County

E. L. Wilson No. 1 Scanlon. Sec. 83, Blk. M, E.L.R.R. Sur. S.D. 150 ft.
E. L. Wilson et al No. 1 Texas Ld. & Mtg. Co., sec. 45, Blk. M, E.L.&R.R. Sur. Drlg. 4,940 ft.

Edwards County

Dan Auld et al No. 1 Rigsby, sec. 16, Blk. OK, G.C.&S.F. Sur., 15 mi. NE of Rock Springs. Sat. L. 3,920 ft.; S.W. 3,943-52 ft.; S.D.
A. P. Carter No. 1 F. D. Sweeten, S&E sec. 48, Blk. 2, B&B Sur., 1½ mi. E of Rock Springs. M.I.M.

Ector County

Fuhrman Pet. Corp. No. 1 E. Cowden, sec. 41, Blk. 43, Twp. 2s, T.&P. Sur. M.I.M.
Shasta Oil Co. No. 1 K. Sands, sec. 32, Blk. 44, T.&P. Sur. Loc.

Fisher County

Martin & Brubaker No. 1 Brown, W. E. Richardson Sur., sec. 4, Blk. R. T.P. 3,192 ft.; S.D. 3,194 ft.; swabbing.
Southern Oil Co. No. 1 Robinson, sec. 172, Blk. 2, H.&T.C. Sur., 2½ mi. NE of Raton. T.D. 3,505 ft.; shut in.
Tide Water Associated Oil Co. No. 1 Joe Robinson, W½ NE¼ sec. 172, Blk. 2, H.&T.C. Sur. Drlg. 100 ft.

Gaines County

Amerada Pet. Corp. No. 1 A. Faskin, sec. 160, Blk. G, W.T.R.R. Sur. Drlg. 4,-854 ft.
Amerada Pet. Corp. No. 1 Matthews, sec. 417, Blk. G, C.C.S.D.&R.G.N.G. Sur. R.U.
A. G. Carter No. 1 A. L. Wasson et al, sec. 48, Blk. AX, P.S.L. Sur. T.D. 4,-909 ft.; flwg. 6 B.P.H., 40% w. wtr.
Carter et al No. 1-B Wasson, sec. 47, Blk. AX, P.S.L. Sur. W.O.C. 165 ft.
A. G. Carter et al No. 1 Moore-Langdon, sec. 44, Blk. AX, P.S.L. Sur. S.D.
Continental O. Co. No. 1 Jones, sec. 22, Blk. A-7, P.S.L. Sur. Drlg. 4,255 ft.
Continental Oil Co. No. 1 Moore, sec. 46, Blk. AX, P.S.L. Sur. W.O.C.
T. N. Sloan et al No. 1 Barber, NE cor. sec. 19, Blk. A-28, P.S.L. Sur. Drlg. 3,120 ft.
Wentz Oil Co. No. 1 Dalmont, sec. 5, Blk. A-22, P.S.L. Sur. Drlg. 4,680 ft.

Garza County

S. Caprito No. 1 Post Estate, sec. 230, Blk. 5, K. Aycock Sur. Drlg. 3,515 ft.

Glasscock County

Moore Bros. No. 1 King, sec. 46, Blk. 36, Twp. 1s, T.&P. Sur. R.U.S.T.

Hockley County

R. F. Duggan et al No. 1 Yellow House Land Co., cen. Labour 11, League 718 State Capitol Lds. R.U.R.
Stanolind O. & G. Co. No. 1 A. A. Slaughter, C SW¼ Labour 76, League 37, Zavalla Co. Sch. Lds. Sur. S.D. 200 ft.

Howard County

Iron Mt. Oil Co. No. 1 D. H. Snyder, sec. 28, Blk. 30, Twp. 1s, T.&P. Sur. S.D. 60 ft.; to R.U.R.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ sec. 34, Blk. 74, Twp. 6. Fsg. 3,076 ft.

Jeff Davis County

H. D. Wilcox et al No. 1 Jones-Coffield. Drlg. 1,482 ft.

Loving County

Barnett Pet. Co. No. 1 Johnson, sec. 2, Blk. 57, Twp. 1, T.&P. Sur. S.D.
Barnett Pet. Corp. No. 2 W. D. Johnson, sec. 12, Blk. 56, Twp. 1, T.&P. Sur. Drlg.
Finley et al No. 1 W. D. Johnson, sec. 24, Blk. 56, Twp. 1, T.&P. Sur. S.D. 3,-666 ft.; top L. 3,577 ft.; top sd. 3,-614 ft.
Stanolind O. & G. Co. No. 1 M. Kyle, sec. 20, Blk. 55, Twp. 1, T.&P. Sur. P.B. to 3,946 ft.; T.D. 3,984 ft.; S.D.
Woodley Pet. Co. No. 1 Kloh, sec. 21, Blk. 55, Twp. 1, T.&P. Sur. R.U.R.

Mitchell County

Grisham-Hunter Corp. No. 1 Morrison, sec. 34-29-1n, T.&P. Sur. Drlg. 1,722 ft.
Mitchell O. & G. Co. No. 1 Z. Morrison, sec. 36, Blk. 29, Twp. 1n, T.&P. Sur. Drlg. 1,743 ft.

Pecos County

Cannon & Cannon No. 1 University, sec. 2, Blk. 20. Drlg. 925 ft.
Dobbs No. 1 University, sec. 30, Blk. 18. Drlg. 1,674 ft.
Humble O. & R. Co. No. 1 E. M. Gray, sec. 94, Blk 11, G.H.&S.A. Sur.; 5,000-ft. test. Top Del. L. 5,010 ft.; drlg. 5,251 ft.
K. Kimberlin No. 1 Humble-Young, sec. 49, Blk. 10, H.&G.N. Sur. S.D. 895 ft.
W. Penn No. 1 Tipton, sec. 85, Blk. 8, H.&G.N. Sur. T.D. 1,940 ft.; standard-izing.
G. J. Smith No. 1 W. E. Smith, sec. 37, Blk. 1, I.&G.N. Sur. Drlg. 622 ft.
Tex-Mex Pet. Co. No. 1 Williams, sec 79½, Blk. 8, H.&G.N. Sur. T.D. 1,315 ft.; U.R. csg.
S. Thompson No. 1 Elsinore Cattle Co. sec. 54, Blk. D, G.C.&S.F. Sur. T.D. 4,910 ft.; R.U.R.
Trans-Pecos Oil Co. No. 1 Gallagher, sec 9-51-10, T.&P. Sur. S.D. 1,475 ft.
Trans-Pecos Oil Co. No. 1 Popham. S.D. 535 ft.
Young No. 1 Perry, sec. 3, Blk. Z, T.C. R.R. Sur. Fsg. 1,575 ft.

Presidio County

L. C. Brite No. 4 fee, C NW¼ sec. 113, Blk. 12, G.H.&S.A. Sur. Drlg. 2,800 ft.
A. H. Main No. 1 Greeniee, sec. 40, Blk 347, 13 mi. NE of Marfa. No report.
Sadler Bros. et al No. 1 Bagley. S.D. 3,315 ft.

Reagan County

K. E. Sherman No. 1 W. E. Friend, SW cor. sec. 3, Wm. Allen Sur. Drlg. 746 ft.
Moore Bros. No. 1 University, sec. 8, Blk. 7. Spudded and S.D.

Reeves County

Barnett Pet. Corp. No. 1 Ely, sec. 38, Blk. 71, P.S.L. Sur., 12 mi. NW of Toyah. S.D. 395 ft.
General Crude Oil Co. No. 1 T. P. Land Trust, C NE¼ sec. 15, Blk. 56, Twp. 2, T.&P. Sur. M.I.M.

Runnels County

Hall Oil Co. No. 1 Beddo, sec. 51, Thompson Casey Sur. R.U.R.
K Z Oil Co. No. 1 B. Fletcher, E. C. Good Sur. S.D. 750 ft.
Price & Kramer No. 1 Giesecke, Blk. 227 Hughes Sur. S.D. 2,503 ft.
Stevens & Glover No. 1 Fowler, sec. 150 T.T.R.R. Sur., 2 mi. NE of Ballinger Drlg. 520 ft.

Schleicher County

J. M. Cooper No. 2 B. Page, sec. 40, Blk. L, G.H.&S.A. Sur. Drlg. 1,856 ft.
Tex.Tor Oil Corp. No. 1 Judkins & Spencer, C of SW¼ sec. 33, Blk. A, A.&B. Sur. Drlg. 427 ft.

Scurry County

Bristow & Cantrell No. 1 Tomlinson, sec 122, Blk. 97, H.&T.C. Sur. Drlg. 3,-125 ft.
E. L. Goos No. 1 Henderson, sec. 148, Blk. 97, H.&T.C. Sur. Drlg. 3,338 ft.
C. W. Guthrie et al No. 1 F. W. Hardee, sec. 99, Blk. 97, H.&T.C. Sur. S.D.

Terry County

Anthony & Rice No. 1 Brownfield, C NW¼ sec. 28, Blk. A-1, E.L.R.R. Sur. M.I.M.
Crump & Corrigan No. 1 Lewright, 660 ft. NE, sec. 1, Blk. C-37, P.S.L. Sur. T.D. 5,133 ft.; drlg. plug.
R. L. Foree No. 1 A. E. Pool, sec. 54, Blk. D-11, D.&S.E. Sur. Spd.

Upton County

John Emsch No. 1 Lyon, sec. 8, Blk. 3½, T.D. 2,243 ft.; pumped 54 bbls. oil in 6 hrs.
John Emsch No. 1 University. Drlg. 3,-131 ft.

Ward County

F. H. Murphy et al No. 1 Monroe, sec. 210, Blk. 34, H.&T.C. Sur. No report.
Magnolia Pet. Co. No. 1-55 Sealey, sec. 55, Blk. F, G.M.M.B.&A. Sur. Fsg. 3,049 ft.
L. F. White et al No. 1 Rector-Monroe, E. cor. sec. 3, Blk. 1, W.&N.W. Sur. Top Del. L. 4,635 ft.; top Del. sd. 4,670 ft.; S.O. 4,690 ft.; T.D. 4,700 ft.; P.B. 4,698 ft.; R.U.; bailing.

Yoakum County

Bahan et al No. 1 Shook Est., sec. 420, Blk. D, John H. Gibson Sur. Top lime 4,570 ft.; drlg. 5,246 ft.
Magnolia Pet. Co. No. 1 Mrs. M. E. Taylor, sec. 201, Blk. D, John H. Gibson Sur. Elev. 3,607 ft.; drlg. 4,086 ft.
Moore Bros. No. 1 Cleveland, sec. 706, Blk. D, J. H. Gibson Sur. Loc.

RANGER (CENTRAL TEXAS) DISTRICT

Brown County

Charter O. & G. Co. No. 1 T. B. Slick, N edge of Grosvenor, sec. 41, H.T.&B. Drlg. 1,230 ft.
Garland Moore et al No. 1 T. S. Williams, 1 mi. NE Grosvenor. Sec. 40, H.T.&B. Sur., Abst. 2037. Spdg. & S.D.
Donald P. Kenyon No. 1 Stone, 2 mi. NW Brownwood, H. S. Thayer Sur. No. 206. Ellenberg test. Drlg. 1,140 ft.
West Texas O. & R. Co. No. 1 J. P. Newton, 3 mi. S Cross Cut, W. L. Swain Sur. No. 145. Drlg. 890 ft.

Callahan County

Hal Hughes No. 1 Poindexter, 330 ft. fr. N&E of sec. 350, Geo. Hancock. Sur. 2 mi. NE Oplin. R.U.R. for 4,500 ft. test.
J. C. Jackson et al No. 1 Thompson, 2 mi. S. Eula, sec. 30, B.B.B.&C. Sur. Drlg. 450 ft.
Owen Murray & Donald O'Neal No. 1 E. L. Estes, NW cor. county, sec. 66, T.&P. Sur., Blk. 14. Drlg. 1,875 ft.
R. F. St. John No. 1 M. M. Perkins, 3 mi. N Clyde, sec. 73, B.B.B.&C. Sur. S.D. 1,-785 ft.
B. A. Wilkinson, Trustee, No. 1 F. L. Martin, sec. 69, T.&P. Sur. Blk 14. S.D. 1,-375. Reprs.

Coleman County

Dixie O.&G. Co. No. 1 Reaves, 6 mi. NW Bangs, J. M. Rhine Sur. No. 629. S.D. 805 reprs.

Comanche County

N. D. Gallagher et al No. 1 Mrs. B. I. Terry, Desdemona pool, N. H. Kuykendall Sur. Skd. 10 ft. N. Drlg. 1,300 ft.

Eastland County

J. T. Anderson No. 1 Crist, 8 mi. N of Rising Star, sec. 36, Lavaca Co. Sch. Lds. T. D. 3,010 ft. pipe collapsed.
Barnett Pet. Corp. No. 1 Downtain, 1½ mi SE of Eastland, sec. 2, E.T.R.R. Sur., Blk. 6 O.S. 1,440-50. Est. 2 bbls. per hr. Prep. to run 6-in.
Barrett & Moon No. 1 Foote, 4 mi. NE Carbon, sec. 9, H.&T.C. Sur., Blk. 2. Spd. and S.D.
F. J. Estes No. 1 Gentry, A. Popejoy Sur. S.D. 3,000 ft.
Monark O. & G. Co. No. 1 Downtain, 200 ft. fr. N & 400 ft. fr. W of NF¼, sec. 14 H.&T.C. Sur. Blk. 4, 3 mi. N Eastland. Spdg.
L. A. Thompson No. 1 C. V. Fox, 4½ mi. S of Ranger, Lot 28, McLennan Sur., Lge. 2. S.D. for csg.

Erath County

Jess Hickey et al No. 1 W. M. Martin, 2 mi. SE Desdemona, D. J. Otho Millard Sur. A-533. Drlg. 100 ft.

Haskell County

Danciger O. & R., Inc., No. 1 Pardue, 8 mi. E Stamford, sec. 48, Thos. Toby Sur., Abst. 396. Drlg. 2,045 ft.
Forest Dev. Corp. No. 1 Pardue, 6 mi. NE Stamford, sec. 1, H.&T.C. Sur., Blk. 1. Drlg. 1,930 ft.
E. W. Marland & H. B. Drake No. 1 Corothers, 6 mi. S Haskell, 2120 ft. fr. S & 1800 ft. fr. N of sec. 67 D. E. Zaaz Sur. Loc for 2,700 ft. cable tool test.

Jones County

Art Cox No. 1 West, 10 mi. E Noodle Creek pool, Lot 72, Godwin Subd., Dewitt Co. Sch. Lds. Drk.
Fain & McGaha Oil Corp. No. 1 Eula G. Lucas, 5½ mi. NE Avoca, sec. 168, B.B.B.&C. Sur. Drlg. 1,950 ft.

Fain & McGaha Oil Corp. No. 1 J. H. Wheeler, 3 mi. NW Sandy Ridge pool, sec. 55, O.A.L. Sur.

G. M. Gillespie No. 1 W. H. McKeever, 4 mi. SE Anson, sec. 53, O.A.L. Sur. 5 bbls. Drlg. 2,505 ft.

Humble O. & R. Co. No. 1 Teaff Est., E S and W of NE¼ sec. 33, T.&P. Sur., Blk. 18. Loc. for 5,600-ft. Ordovician test. Drlg. 700 ft.

T. D. Humphrey No. 1 F. D. Moore, 2 mi. S Hawley pool, sec. 3, T.&P. Sur., Blk. 16. Drlg. 1,970 ft.

T. D. Humphrey No. 1 Radford, 3 mi. S Hawley, 2420 ft. fr. S 220 ft. fr. W of sec. 38 T.&P. Blk. 16. Drlg. 1,545 ft.

Iron Mountain Oil Co. No. 1 Olander, 3 mi. E Avoca, 220 ft. fr. N & E of SW¼ sec. 196, B.B.B.&C. Sur. Drlg. 1,920 ft.

Moutray Oil Co. et al No. 1 G. M. Nugent, 3 mi. N of Hawley pool, sec. 23, T.&P. Sur., Blk. 15. Drlg. 2,320 ft.

Owens-Snebold Oil Corp. No. 1 J. L. Herndon, 2 mi. SW Anson, S.P.R.R. Sur., Blk. 2. Drlg. 1,400 ft.

W. H. Peckham No. 1 Davis et al, 3 mi. SW Lueders. Subd. 8, F. M. Smith Sur. No. 3. Drlg. 1,200 ft.

Riddle et al No. 1 J. D. Freeman, 8 mi. SW Anson, sec. 6, T.&P. Sur., Blk. 17. Drlg. 2,300 ft.

S. B. Roberts Co. and Brown Eagle Oil Co. No. 1 W. L. Lewis, 1 mi. NE of Hawley, M. Martinez Sur. No. 194. 6⅝ 1,968. O.S. 1,968-70 ft. Show O.&G.

Southern Oil Co. No. 1 B. W. Thane NE cor. County. Andrew Jones Sur. 114. Drlg. 150 ft.

L. B. Tannehill et al No. 1 Willis, 2 mi. NW Sandy Ridge pool, 900 ft. fr. N & 300 ft. fr. W of E½ sec. 2 J. C. Patton Sur. Loc.

Texas Inland Oil Co. et al No. 1 Rowell, 5 mi. E Anson, 220 ft. fr. N & E of NW¼ sec. 37 O.A.L. Sur. R.U.

Palo Pinto County

Paul Garrett No. 1 Mabry heirs, NE cor. county, sec. 2,572, T.E.&L. Sur. Drlg. by bit 470 ft.

Henry Hobbs et al No. 1 Bessie Holt, 4 mi. S. Graford, sec. 1,783, T.E.&L. Sur. S.D. 200 ft.

Earnest Lloyd et al No. 1 Bailey, 3 mi NE Graford, sec. 2,003, T.E.&L. Sur S.D. 1,802 ft.

Shackelford County

Ben Banner No. 1 Dawson & Conway, 4 NE Morris-Buie pool, C NW¼ & SE¼ sec. 176, E.T.R.R. Sur. Drlg. 1,380 ft.

Humble O. & R. Co. No. 4 Geo. DeLafosse, E C line county, sec. 1550, T.E.&L. Sur. Drlg. 1,900 ft.

M. P. Moore et al No. 1 Geo. Gray, W side Bluff Creek pool, sec. 208, E.T.R.R. Sur. Drlg. 1,300 ft.

Stephens County

Barnett Pet. Corp. No. 1 J. O. Corbett 4 mi. SE Ivan, sec. 3, S.P.R.R. Sur., Blk. 3. Fsg. Bit. 800 ft.

Clark & Cowden et al No. 2 Echols Heirs, 6 mi. SE Ivan, sec. 10, S.P.R.R. Sur., Blk. 3. Drlg. 2,200 ft.

Cox & Caprito No. 1 Donnell, 1 mi. SW Eliasville, 400 ft. fr. E 2,400 ft. fr. S of sec. 1,208 T. E. & L. M.I.

O. J. Perren No. 1 J. K. P. Hughes, NE cor. County of NW¼ sec. 6 A.B.&M. Sur. Abst. 2683. Drlg. 1,100 ft.

Philtop O. & G. Co. No. 1 T. M. Corbett, 8 mi. NE Caddo, Edward Bannershauser Sur., Abst. 149. Drlg. 3,475.

W. J. Rhodes No. 1 Black Bros., 8 mi. NE Breckenridge, 2,200 ft. fr. N & 800 ft. fr. E of sec. 1,135 T.E.&L. Loc. for 3,400 ft. test.

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Pennsylvania Investigation of Oil and Gas Starts

PITTSBURGH, Pa., June 21.—A public hearing on the oil and gasoline retailing business in southwestern Pennsylvania was held June 18 and 19 in Pittsburgh, Judge Ralph H. Smith, chairman of the oil industry investigation commission, presiding. Meetings will be held this week in Franklin and Oil City.

The commission held its first public hearing at Harrisburg June 11. In addition to Judge Smith, chairman, the members are: William H. Godfrey, of Philadelphia, distributor; John E. McComb, of Rouseville, a producer; Senator E. J. Thompson, of Phillipsburg; and Representative Michael C. Chervenak, Jr., of Portage.

Howard Pew, president, Sun Oil Co., charged at the Harrisburg hearing that the chain store tax, enacted by the 1937 legislature was responsible for creating "chaos" in the industry "because oil companies have been forced out of retailing." He said the petroleum business needed no state regulation, that "half of the retail price depends on factors in which the oil companies have no influence whatever.

"So long as the oil companies operated filling stations of their own and were a factor in retailing, their participation afforded an element of balance in the determination of the retailer's spread. But since the companies have been forced out of retailing by punitive chain store legislation, this balancing factor has been lost. This has resulted in thousands of dealers being thrown into the retailing department of the business."

W. C. Yeager,, vice president, Atlantic Refining Co., said the state, with its 700 producers, was "in a healthy condition of production" and that the price of gasoline had dropped 25 per cent more in recent years than the price of other commodities.

W. V. Hartman, Gulf Refining Co., said the oil industry in Pennsylvania was "not in so very bad shape." He singled out "price wars" as the most serious trouble and explained many dealers posted prices publicly and provided their products at lower figures to preferred customers.

At the Pittsburgh hearing, John H. Downes, owner of six gasoline stations, told of concessions to large companies, of profits made by buying gasoline under "fleet contract," asserting "they want it for their fleet of trucks, they get it at the consumer price and then sell it from their own pumps to the public. Several large organizations on preferred lists buy gas at 14 or 14½ cents and sell it back to their employes at two cents under the regular prices. The big companies," he said, "are selling gasoline at 15½ cents to the '100 per cent' dealers, 15 cents to the 'split' dealers, and 14½ cents to the large consumers."

West Texas Fields

(Continued from Page 122)

of the associates who drilled the discovery, is preparing to drill a 4,250-foot rotary test on the F. De Cordova lands in the Henry Stewart Survey, about 1¼ miles northwest of the discovery well.

Jack Wildcat

E. E. Van Eman and W. M. Richards are moving in rotary for a 3,800-foot wildcat test on the C. L. Whitsett lands in the William McElroy Survey, in the northern part of Jack County. M. M. Garrett of Dallas worked the geology on the area surrounding the test, which is one of several now going down in various parts of the county, others being proposed as more blocks are being taken.

Panhandle District

The Hobbs Oil Co. has sold its block of leases and gas discovery well in the northern part of Hansford County, to Phillips Petroleum Co. The discovery well is located on the J. P. Pearson-Hitch lands, in section 290, Block 2, G.H.&H. Survey, and it was estimated good for 4,000,000 to 8,000,000 feet per day after a shot. It logged the first gas in dolomite at 2,690 feet, was drilled to 2,864 feet, but plugged back to 2,825 feet. The block consists of 14,000 acres, and will probably be developed as the purchasing company needs the gas for its plant operations.

WEST TEXAS COMPLETIONS

Andrews County

Bodkins & Barron No. 1 Kemp, 4,220-4,476 feet, shot, 709 bbls.

Ector County

Bond & Harrison No. 7 Rumsey, 4,165-4,275 feet, acidized, 674 bbls. Broderick & Calvert No. 3 Johnson, 4,177-4,267 feet, shot, 823 bbls. Devonian Oil Co. No. 4-B Scharbauer, 4,163-4,220 feet, acidized, 1,455 bbls. Gulf Oil Corp. No. 16 Goldsmith, 4,144-4,245 feet, acidized, 2,227 bbls.; No. 22 Goldsmith, 4,125-4,220 feet, shot and acidized, 1,072 bbls. Landreth Oil Corp. No. 3-B Scharbauer, 4,155-4,215 feet, acidized, 1,093 bbls.; No. 6-C Scharbauer, 4,170-4,234 feet, acidized, 1,303 bbls.; No. 4-G Scharbauer, 4,171-4,215 feet, acidized, 1,127 bbls.; No. 3 Holt, 4,174-4,229 feet, shot, 350 bbls. Penn Oil Co. No. 2 Scharbauer, 4,174-4,220 feet, acidized, 808 bbls. Stanolind Oil & Gas Co. No. 47 Cowden, 4,144-4,340 feet, plugged back to 4,250 feet, shot, 493 bbls. Texas Co. No. 15 Connell, 3,487-3,673 feet, shot, 259 bbls. Texas Pacific Coal & Oil Co. No. 3 Scharbauer, 4,110-4,273 feet, shot, 652 bbls. York & Harper and others No. 1 J. W. Buchanan, dry and abandoned 4,545 feet, elevation 2,920 feet.

Fisher County

General Crude Oil Co. No. 8 George, 3,079-3,120 feet, acidized, 45 bbls. on pump.

Howard County

Illinois Oil Co. No. 3 Lane, 2,550-2,830 feet, shot, 761 bbls. Sinclair Prairie Oil Co. No. 50 Lodge, 2,507-2,770 feet, shot, 509 bbls.

Pecos County

Cardinal Exploration Co. No. 1-A Tippett, dry and abandoned 997 feet.

Upton County

British American Oil Co. No. 9 Robbins, 2,219-52 feet, acidized, 730 bbls. J. W. Ellis No. 7 Robbins, 1,962-2,132 feet, acidized, 698 bbls. Humble Oil & Refining Co. No. 7 Reese, 2,575–2,646 feet, acidized, 357 bbls. on pump. Magnolia Petroleum Co. No. 7 Hughes, 2,212-81 feet, acidized, 497 bbls. C. C. Moorman No. 1-B Burleson, 2,097-2,128 feet, plugged back to 2,122 feet, acidized, 103 bbls. on pump. Snowden & McSweeney No. 5 Hughes, 2,335-40 feet, acidized, 385 bbls. on pump, 2 per cent water. Texas Pacific Coal & Oil Co. No. 2-B Lane, 2,190-2,222 feet, plugged back to 2,199 feet, acidized, 325 bbls. on pump; No. 16-C Lane, 2,289-2,304 feet, shot and acidized, 149 bbls. on pump. Williams & Williams No. 4 Robbins, 2,117-90 feet, 649 bbls. on pump.

Ward County

Atlantic Refining Co. No. 3-B University, 2,540-2,770 feet, shot, 878 bbls. Bond & Harrison No. 4 Dorr, 2,235-2,450 feet, 53 bbls. on pump. Gulf Oil Corp. No. 29 Estes, 2,475-2,620 feet, shot, 1,833 bbls.; No. 31 Estes, 2,453-2,620 feet, shot, 1,811 bbls., shot; No. 32 Estes, 2,488-2,650 feet, shot, 397 bbls. Pat Hill No. 15 Clements, 2,251-2,331 feet, shot, 30 bbls. Humble Oil & Refining Co. No. 18-F University, 2,590-2,734 feet, shot, 69 bbls. C. F. Kolp No. 3 Hartage & Wilson, 2,310-2,495 feet, plugged back to 2,475 feet, shot, 22 bbls. Magnolia Petroleum Co. No. 2 Brillhart, 2,375-2,498 feet, shot, 48 bbls. Peck and others No. 5 Monroe, 2,240-2,335 feet, shot, 80 bbls. Provine & O'Quinn No. 2 Hadwin, 2,135-2,220 feet, shot, 148 bbls. Rixford and others No. 6 Green, 2,395-2,431 feet, shot, 22 bbls. Sinclair Prairie Oil Co. No. 9 Hill, 2,362-2,492 feet, shot, 180 bbls. Tide Water Associated No. 26 Johnson, 2,542-2,670 feet, shot, 1,210 bbls.; No. 28 Johnson, 2,528-2,648 feet, shot, 1,037 bbls.; No. 29 Johnson, 2,515-2,635 feet, shot, 3,283 bbls.; No. 30 Johnson, 2,530-2,661 feet, shot, 1,555 bbls.; No. 31 Johnson, 2,510-2,632 feet, shot, 2,303 bbls.

Winkler County

W. D. Ambrose No. 1 McCutcheon, 2,797-3,053 feet, shot, 499 bbls. Atlantic Refining Co. No. 12-B Leck, 3,020-90 feet, shot and acidized, 619 bbls.; No. 4 Lovett, 2,765-3,100 feet, plugged back to 3,080 feet, shot, 1,163 bbls.; No. 10 Lovett, 2,795-3,141 feet, shot, 387 bbls.; No. 6-E Leck, 3,010-80 feet, shot, 1,643 feet. Amon G. Carter No. 6 Walton, 3,233-3,390 feet, shot, 429 bbls. Empire Oil & Refining Co. No. 3-E Daugherty, 2,945-3,061 feet, acidized, 2,319 bbls. Falcon Oil Co. No. 6 McCutcheon, 3,210-3,545 feet, shot, 240 bbls.; No. 10 McCutcheon, 3,250-3,550 feet, shot, 499 bbls.; No. 2-A McCutcheon, 3,210-3,533 feet, shot, 119 bbls. through three-quarters inch choke. Bert Fields and others No. 11 Pure-Clapp, 2,726-3,105 feet, shot, 1,840 bbls. Gulf Oil Corp. No. 1-A Edwards, 3,110-75 feet, shot, 268 bbls., 2 per cent water. Herbert Oil Co. No. 2 Hendricks, 2,810-3,195 feet, shot, 483 bbls. Humble Oil & Refining Co. No. 13-C Colby, 2,805-3,085 feet, shot, 912 bbls.; No. 7-A Walton, 2,783-3,140 feet, shot, 142 bbls. Magnolia Petroleum Co. No. 79 Walton, 3,091-3,246 feet, shot, 327 bbls. W. K. Royalty Co. No. 6-A Walton, 3,035-52 feet, 2,917 bbls.

PANHANDLE COMPLETIONS

Carson County

Gulf Oil Corp. No. 19 Cooper, 2,955-3,020 feet, shot, 575 bbls. on pump. Sinclair Prairie Oil Co. No. 7 Cooper, 2,945-3,047 feet, shot, 625 bbls. on pump. United Crude Oil Co. No. 7-C Cooper, 3,005-3,115 feet, shot, 789 bbls. on pumps.

Gray County

Bradshaw Oil & Gas Co. No. 6 Sackett, 3,295-3,316 feet, shot, 468 bbls. on pump. Gayden Oil Co. No. 3 McKinney, 3,075-3,344 feet, plugged back to 3,285 feet, 183 bbls. on pump. Empire Oil & Refining Co. No. 3 Walberg, 2,975-3,045 feet, plugged back to 3,039 feet, 559 bbls. on pump. Gulf Oil Corp. No. 8 Barrett, 3,200-89 feet, shot, 632 bbls. on pump. Magnolia Petroleum Co. No. 2 Catlin, 3,130-3,223 feet, shot, 679 bbls. on pump. Stanolind Oil & Gas Co. No. 6 Culler, 3,145-3,276 feet, shot, 552 bbls. on pump; No. 4 Merten, 3,215-70 feet, shot, 256 bbls. on pump.

Hutchinson County

Barnsdall Oil Co. No. 5 Lewis, 2,871-3,020 feet, shot, 814 bbls. on pump. Benonine Oil Co. No. 6 Starnes.

3,148-3,220 feet, shot, 1,176 bbls. on pump. Gulf Oil Corp. No. 71 Dial, 3,018-59 feet, shot, 780 bbls. on pump. Phillips Petroleum Co. No. 2 Johnson, 3,045-55 feet, 372 bbls. on pump; No. 11 Perkins, 2,970-3,001 feet, shot, 357 bbls. on pump. Skelly & Cabot No. 4 Herring, 3,050-3,132 feet, shot, 261 bbls. on pump. Stanolind Oil & Gas Co. No. 4-A Haile, 2,994-3,058 feet, shot, 100 bbls. on pump; No. 2-B Haile, 3,010-3,065 feet, shot, 466 bbls. on pump. Stekoll Oil Co. No. 5 Dial, 2,981-3,080 feet, shot, 420 bbls. on pump; No. 7 Wisdom, 3,017-3,120 feet, shot, 20 bbls.

Moore County

Canadian River Gas Co. No. 2-A Kilgore, 3,035-3,498 feet, 25,300,000 feet gas. Phillips Petroleum Co. No. 1 Mary Beth, 2,855-3,165 feet, plugged back to 3,080 feet, shot, 49,300,000 feet gas.

NORTH TEXAS COMPLETIONS

Archer County

Bridwell Oil Co. No. 1 A. P. Nichols, 1,762 feet, dry. Consolidated Oil Co. No. 2 W. H. Portwood C-D, 1,468 feet, dry. F. H. Gohlke No. 1 Peterson, 1,557 feet, dry. R. L. Hayes No. 3 Earl Beardon, 817 feet, junked. Humble Oil & Refining Co. No. 22 G. B. Hamilton, 1,356 feet, dry. N. McChesney No. 3 G. M. Benson, 869 feet, dry. Petroleum Producing Co. No. 1 B. W. Owens, 1,777 feet, dry. S. & H. Drilling Co. No. 1 C. A. Mangold, 658 feet, dry. Wichita Production Co. No. 1 W. D. Pace B, 1,287 feet, dry.

Baylor County

Consolidated Oil Co. No. 2 W. H. Portwood EE, 1,455 feet, dry.

Clay County

Texas Co. No. 5 J. B. L. Hansard, 1,090-1,102 feet, 65 bbls.

Cooke County

Kerlyn Oil Co. No. 3 Ed Wilson, 2,065-80 feet, 90 bbls. Kingery Brothers and others No. 2 H. Henscheid A, 812 feet, dry. F. W. Merrick, Inc., No. 14 J. W. Hess, 822-28 feet, 10 bbls. Ripps & Ungerman No. 3 W. L. Johnson, 1,902-37 feet, 75 bbls.

Denton County

Denver Producing & Refining Co. No. 1 Gibson, 1,645-54 feet, 50 bbls.

Jack County

Beard & Collier No. 2 Ezzell C, 2,942-86 feet, 85 bbls.; No. 2 Jane Wiggins, 2,925-50 feet, 265 bbls. Big 6 Oil Co. No. 1 Tishie Clayton, 2,890-3,030 feet, 100 bbls. Brazos River Gas Co. No. 4 H. C. Moore, 2,943-53 feet, 10 bbls. Kadane & Fidel No. 1 Clayton Estate, 2,999-3,035 feet, 25 bbls. H. M. Leidecker No. 1 J. W. Padgett and others, 3,190-3,218 feet, 165 bbls. Moncrief & Shira No. 4 S. M. Jones, 3,005-3,155 feet, 550 bbls. Ohio Fuel Supply Co. No. 2-A Rhodes-Kuykendall, 2,933-73 feet, 605 bbls. Pacific Western Oil Corporation No. 2 L. J. Hester, 2,917-3,076 feet, 12 bbls. J. W. G. Winnett No. 2 C. C. Henderson, 365 feet, dry. Yorktex & States No. 2 Clayton B, 2,972-3,000 feet, 220 bbls.

Montague County

Continental Oil Co. No. 14 J. W. Rowland, 978 feet, dry. Gibson & Jennings No. 2 Roxye Howard, 2,056 feet, dry. Sinclair Prairie and others No. 9 D. T. Holt, 1,713 feet, temporarily abandoned.

Wichita County

E. W. Carter, Trustee, No. 1 L. F. Ramming, 396 feet, dry. Perkins & Snyder No. 9 J. Serrien, 1,569-1,760 feet, 15 bbls. Ruyle Farm Oil Co. No. 51 L. P. Ruyle, 1,540-65 feet, 15 bbls. P. H. Flynn No. 1 W. B. Honaker, 800 feet, dry. Forbess & Golden No. 3 C. A. Mertens, 921 feet, dry. Hammon and others No. 1 A. F. Fassett, 1,505 feet, dry. W. B. Omohundro and others No. 1 Gibson C, 2,036 feet, dry. Perkins & Cullum No. 30 T. L. Burnett and others, 1,360-75 feet, 25 bbls. Pois & Schulz No. 7 Foster C, 340-50 feet, 25 bbls.; No. 2 Foster F, 1,056 feet, dry; No. 1 Foster G, 1,871 feet, dry. George Proctor and others No. 11 Foster A, 1,542-52 feet, 250 bbls. Reno Oil Co. No. 15 M. A. Eads B, 1,537-50 feet, 6 bbls. O. J. Richardson No. 2 Waggoner, 655 feet, dry.

Wilbarger County

Consolidated Oil Co. No. 2 Waggoner BB, 1,947 feet, dry. Humble Oil & Refining Co. No. 12 Waggoner H, 3,036-48 feet, 1,800 bbls., flowing; No. 24 Waggoner H, 3,047-69 feet, 2,150 bbls., flowing. Phillips Petroleum Co. No. 194 Waggoner, 3,059-73 feet, 2,265 bbls., flowing. Texas Co. No. 436 Waggoner A, 1,802-1,984 feet, 65 bbls.

Throckmorton County

Canyon Oil & Gas Co. No. 1 E. M. Marrs and others, 550 feet, dry.

Young County

S. S. Alexander Oil Corporation No. 10 G. B. Hamilton, 1,005 feet, dry. F. J. Allbritain No. 11 W. W. Gregg, 662 feet, dry. L. T. Burns No. 10 Rushing, 905 feet, dry. Cable Oil Co. No. 22 Snider, 590-92 feet, 5 bbls. F.H.E. Oil Co. No. 9 Mrs. N. Finch C, 659-670 feet, 12 bbls. Golding & Cochran No. 1 M. Groves, 1,050 feet, dry. G. E. Grininger No. 7 S. & N. Prideaux, 745 feet, dry. E. L. Hanson No. 4 J. O. Stratton, 512-22 feet, 5 bbls. Johnson & Mitchell No. 1 D. Keith, 820 feet, dry. Kimmell Lea & Co. No. 7 R. Campbell, 999 feet, dry. L. A. Long No. 1 W. A. Thompson, 2,125 feet, dry. G. W. Martin No. 4 J. W. Jones, 550 feet, dry. Petroleum Producing Co. No. 1 C. W. Fisher and others, 655 feet, dry; No. 12 C. E. Luton, 680 feet, dry. O. L. Swanson No. 1 J. W. Bailey, 903 feet, dry. Texas Co. No. 11 Finch A, 772 feet, dry. West & Honea No. 1 B. N. Honea, 1,012 feet, dry. S. Williams No. 1 W. R. Drum, 150 feet, dry. Yorktex Petroleum Co. No. 1 W. E. Steele, 2,600 feet, dry.

Kansas Fields

(Continued from Page 115)

section 10-34-13, had Siliceous lime at 1,910-11 feet, total depth, and pumped 34 bbls. of oil, with 10 per cent water, completed.

First reports of new operations in Chautauqua County: Shaffer & Howell No. 2 Landon & Floyd, NW NE SW section 23-32-10, rigging up machine; C. E. W. Skiles No. 2 Landon & Floyd, NE NW SE section 23-32-10, rigging up machine; Sagamore Oil & Gas Co. No. 1 Cunningham, SE SE SW section 8-32-11, an old well, rigging up to deepen; Wallace and others No. 1 Shouse, SW SW NE section 2-32-12, pumped 1½ bbls. of oil an hour at 358-364 feet, to acidize; Ben Gralapp No. 1 Miller, SW SE SW section 23-32-12, drilling at 1,178 feet.

Lyon County

Davis & Sory No. 1 Byrd, SW SW SE section 32-21-11, Lyon County wildcat, was abandoned at 590 feet, total depth.

Scott County

Atlantic Refining Co. No. 1 Mark C, C NE SE section 15-20-33w, Scott County, had Siliceous lime at 5,470-90 feet, total depth, and was abandoned when water intruded.

Stevens County

Stevens County Oil & Gas Co. No. 1 Slease, C E half section 35-33-39w, Stevens County, produced 13,000,000 feet of gas and was completed at 2,756 feet, total depth.

Various First Reports

E. H. Moore and others No. 1 Waco, SW SW NW section 29-29-1e, Sedgwick County, was a location.

Morgan and others No. 1 Cook, NW cor. section 29-30-12, wildcat in Elk County, was rigging up machine.

Fred Rapp No. 1 Houghland, NW NW SE section 2-25-15, Woodson County, was drilling at 400 feet.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Pyle Jr., C NW NE section 8-29-16w, wildcat in Kiowa County, was a location.

Crawford and others No. 1 Jones, NW cor. section 35-17-16w, wildcat in Rush County, was a rig.

F. L. Thorn and others No. 1 Dix, SE SE SW section 31-14-24w, wildcat in Trego County, was a rig.

Gulf Coast Fields

(Continued from Page 96)

in section 1 topped sand at 5,387 feet and cored to 5,416 feet where a production test will be made.

In the Bayou Cocotriz field, Terrebonne Parish, Shell Petroleum Corp. No. 1 Pelican is bottomed at 10,325 feet where progress has been delayed by a fishing job. The well is located in section 20 and has apparently missed the discovery horizon encountered in the first well, completed at 9,493 feet. No. 2-B Realty has cemented 10¾-inch surface casing at 2,487 feet.

On the north Crowley Prospect, Acadia Parish, Humble Oil and Refining Co. No. 1 Federal Land Bank was sidetracked at 7,642 feet and is drilling in shale at 7,766 feet. Location is in section 34-8s-1e. On the Moss Lake Prospect, Calcasieu Parish, Stanolind Oil & Gas Co. made location for No. 1 Prairie Farms, NW SW section 10-11s-9w. It is located on a geophysical prospect of a block of approximately 5,500 acres.

Union Sulphur Co. No. 1 Hebert, recompleted last week through perforations at 8,318-8,321 feet as the first oil well in the Big Lake field Cameron Parish flowed 500 bbls. of oil per day through a quarter-inch choke, but continues to make from 4 to 6 per cent b. s. and salt water.

On the East Baton Rouge Prospect located on the Louisiana State University land, East Baton Rouge Parish, Louisiana Crusader Oil Co. has rig up for No. 2 State. The first test was located in section 65 and was abandoned at 7,260 feet.

Louisiana Crusader Oil Co. No. 1 Langley, north of Starks and located on the Pine Island Prospect, Jefferson Davis Parish is bottomed in sand and shale showing gas, and casing is to be cemented following the running of a Schlumberger survey. The casing is being run as a protection against the numerous gas sands which have been encountered and the hole will be drilled deeper.

After several weeks delay due to boiler trouble, Fohs Oil Co. was scheduled to make a production test of No. 1 State Long Lake, Lafourche Parish. Seven-inch casing was cemented on bottom at 9,406 feet and it is to be tested through perforations between 9,300 feet and the total depth. Another prospective pool opener, Amerada Petroleum Corp. and Louisiana Land and Exploration Co. No. 1 State cemented 9⅝-inch casing at 7,118 feet, and is scheduled to be drilled deeper. Sand with streaks of shale showing oil was cored at 6,820-33 feet which will be tested provided no deeper sands are encountered.

On the Lake Mongoulois Salt Dome, St. Martin Parish, Texas Co. No. 3 State has attracted much attention due to oil sand being cored in a sidetracked hole at 7,798-7,804 feet. The salt was encountered at 8,175 feet and the hole was plugged back and sidetracked at 7,794 feet. Location is in section 14-10s-9e.

Rocky Mountain Area

(Continued from Page 110)

Yellowstone County

Western Dakota Oil Co. No. 1 Fox, CEL NW NE sec. 14-2n-23e. S.D. 450 ft.

Broadview Dome Oil Co. No. 1, NE NE SW section 18-3n-23e. T.D. 1,210 ft.; heavy S.G.; will set pipe.

UTAH

Daggett County

Mountain Fuel Supply Co. No. 1 Lauzier, CNL NW NW sec. 27-3n-24e. Drlg. 4,660 ft.

Emery County

Standard Oil Co. of California and Continental Oil Co. No. 1-A Palm, C NW NW sec. 27-23s-11e. Cg. 4,900 ft.

Grand County

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. S.D. 6,715 ft.; M.I. heavier rot. equip.

Columbia Crude Corp. No. 1 Rath, NW SW SE sec. 12-25s-20e. Drlg. 2,265 ft.

Cane Creek Oil Co. No. 1 Govt., NW SW sec. 31-26n-21e. Spdg. 60 ft. in 18-in. hole.

NEBRASKA

Sioux County

J. M. Huber Corp. and United Producers, Inc., No. 1 Morgan, C SW SW sec. 32-35n-56e. Drlg. 2,915 ft.; to go to Sundance.

Dawes County

Stephens Oil Corp. No. 1 Palmer, C NW SW sec. 1-33n-50w. S.D. 2,555 ft. for repairs.

Keith County

Twentieth Century Oil Co. No. 1 Stuken, C NW NW sec. 21-14n-37w. Spdg.

Lincoln County

Smith & Wright No. 1 Hansen, C SW NW sec. 24-15n-31w. S.D. 1,805 ft.

Jefferson County

L. R. Page et al No. 1 Bonham, C SE SE sec. 1-1n-1e. R.U.C.T.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 North Albuquerque, NE SE NW sec. 19-11n-4e. Drlg. 3,356 ft.

San Juan County

The Continental Oil Co. No. 61 Tribal, C S half SE section 35-30n-19w, Rattlesnake pool, is estimated at 20 bbls. per day in the Dakota at 799 feet. Top of the pay was at 775 feet.

Anna Oil Corp. No. 6 Govt., SW NE NE sec. 33-30n-11w. Drlg. 535 ft.

Jack Amenda No. 4 Hart, NW NE SW sec. 25-30n-12w. Drlg. 1,785 ft.

PERSONAL

JAMES A. MOFFETT, chairman of the California-Texas Oil Company, Ltd., returned last Friday from a trip which took him to Europe and to near- and far-eastern countries. The trip was made in connection with his company's marketing, refining and production expansion program. He left ship at San Francisco, and it was his plan to proceed to the company's headquarters in New York this week. Mr. Moffett was vice president of the Standard of California when that organization and the Texas Corporation formed the California-Texas Oil Company, Ltd.

R. B. HECOX, safety engineer of the Standard Oil Company of California in Bakersfield has been transferred to San Francisco. W. E. LOVEJOY, his assistant, succeeds him in Bakersfield.

IRA E. DUGAN, formerly deputy proration umpire in the Fitts pool, Oklahoma, has opened a consulting office in Ada, Okla., and will specialize in geological, valuation and proration work as well as petroleum engineering.

JAMES W. GIRARD, former United States ambassador to Germany and now consul general to Great Britain, has entered the oil business in northern Louisiana by the recent purchase of a small tract in the proven area of the Lisbon field, Claiborne Parish.

H. S. AUSTIN, in charge of the Standard Oil Company of New Jersey pipe line interests, is on a business trip through the Mid-Continent and plans to visit Gulf Coast districts before returning to his office in New York.

R. E. GILE has resigned as assistant district geologist for the Tide Water Associated Oil Company in Midland, Tex., to become district geologist for the British American Oil Producing Company in the same city. FRED KOTYZA has resigned as geologist for the Phillips Petroleum Company to take a similar position in Midland with the Tide Water Associated Oil Company.

W. E. WHITCOMB, long in the scouting and land department in West Texas for the Standard Oil Company of Texas, has been promoted from district land man in Midland and transferred to the company's headquarters in Dallas to do title work. R. S. BRENNAND, scout and land man for the company for the past 11 years, has been moved from Colorado to Midland to scout the extreme western part of the West Texas district.

H. C. BISHOP, of New York, who made a business trip to Fort Worth, Tex., the past week, has just been made a director and vice president of the Crystal Refining Company in Shreveport, La.

J. C. BURKS, vice president of the California Natural Gasoline Association, was elected president for the coming year. H. R. LINHOFF, of the Richfield Oil Corporation, was elected vice president.

MICHAEL GRIFFIN, recently elected vice president and general manager of the Plymouth Oil Company, was formerly general manager in the South Texas area. His headquarters will be in Pittsburgh, Pa.

JAMES A. FAWCETT, III, Chicago representative of the Pennsylvania Grade Crude Oil Association, has resigned to take a position with the Alemite Corporation. JOHN DICKSON, of New York, has been transferred to the Chicago office.

FRED VAN COVERN, director of statistics for the American Petroleum Institute, toured the West Texas oil fields and visited in Tulsa last week before returning to New York from the organization's mid-year convention in Colorado Springs.

J. B. BUTTS, farmer and stockman of Bishop, Tex., is the newly elected president of the Farmers Oil Company. The company, composed of citizens of Bishop, Kingsville, Clarkwood and other Nueces County oil towns, is to operate locally.

A. C. FIELDNER, chief of the technological branch of the Bureau of Mines and president of the American Society for Testing Materials, is to give a paper on "Fuels of Today and Tomorrow" at the fortieth annual meeting of the society in New York next week.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Oklahoma's June completion record was 640 wells, an average of 21.3 wells per day.

British ship builders favoring the further use of diesel engines are warned by an "expert" that the principal source of fuel supply is the United States and that its oil resources will be exhausted by 1936.

The Milliken Oil Company's No. 2 Williams, CNL E half NE section 30-21-8, Pawnee County, Oklahoma, recently completed, is the largest well ever brought in in Oklahoma. It was good for 7,200 barrels initial production.

Osage Indians are contending with the interior department for the right to run their own affairs. The secretary of the interior won't recognize the right, and will not even recognize the newly elected head chief, Bacon Rind.

20 YEARS AGO

F. Eugene Mallory, 66, dies in Waterford, Pa. He was one of the Mallory brothers, Lew, John, Gene and Sid, prominent oil operators in the Eastern fields.

Secretary Daniels of the Navy Department proposes that the government fix the price it will pay for oils for the navy. If the oil industry will not accept the price, he suggests that the government commandeer the oil business.

10 YEARS AGO

Seminole is producing 415,819 barrels a day of which the Carter Oil Company produces over 72,000 barrels. The Carter's peak production in Seminole was reached recently when it brought 100,000 barrels a day to the surface.

The deepest test ever drilled in Texas is now drilling at 6,950 feet. It is in Caldwell County.

Thomas King, 84, dies in Muskogee, Okla. His father sold Samuel Keir's "medicinal oil" before the Drake well came in, and the Kings and Keir started drilling immediately following the Drake discovery.

CLARENCE SNYDER, drilling contractor, of Calgary, Alberta, has been elected to the directorate of Granville Oils, Ltd., of Vancouver, British Columbia.

GUY STEVENS, European representative of the Gulf Oil Corporation and director of the Kuwait Oil Company, has returned to London following a business visit to the United States.

W. M. STRATFORD, vice president of the Texaco Development Company, has returned to his office in New York after spending the past few weeks on business in various European cities.

J. L. BARSTOW, independent oil operator of Baker, Mont., is on a motor trip which has covered Wyoming, Colorado and Kansas fields. He will visit Oklahoma and Texas areas before returning home.

CARL W. DAWSON, engineer of the Standard Oil Company of California, maintenance department, has been transferred from Bakersfield to Los Angeles. He is succeeded at Bakersfield by R. J. VILLIGRANA.

PROF. HENRY V. HOWE, head of the Louisiana State University geological department, and CHARLES G. LASKY, Shreveport independent oil operator, have been appointed members of the Louisiana State Minerals Board by GOV. RICHARD W. LECHE.

J. F. HOSTERMAN, formerly assistant division geologist for the Amerada Petroleum Corporation, has been elevated to division geologist in that company's Texas, Louisiana, Arkansas and New Mexico district. He succeeds A. R. DENISON, recently promoted to chief geologist.

PARAGRAPHS

CHARLES P. PREWETT, superintendent of the Golden Bear Oil Company, has returned to his headquarters in Bakersfield, Calif., following a trip to Palo Alto, where his son CHARLES graduated from Stanford University with a degree in petroleum engineering.

RONALD DeFORD, district geologist for the Argo Oil Corporation in Midland, Tex., is on the way to Moscow to attend the International Geological Congress, combining business with a vacation. J. J. BAILEY, formerly geological scout for the Stanolind Oil & Gas Company, is in charge of the Argo office during Mr. DeFord's absence.

W. M. GRIFFITH of Sinton, Tex., was elected vice president and general manager of the Plymouth Oil Company at an executive board meeting in Pittsburgh, Pa. In his promotion from general superintendent of the South Texas area Mr. Griffith succeeds the late J. G. FARQUAHAR. Prior to his association with Plymouth he was assistant superintendent of the affiliated Big Lake Oil Company, Texon, Tex.

CARL H. BEAL, geologist and engineer of Los Angeles, has left for Alaska to combine a big-game hunting expedition with a visit to the wildcat being drilled by the Iniskin Drilling Company of which he is a director.

TOM CONNALLY, United States senator; JAMES V. ALLRED, governor; WALTER WOODUL, lieutenant-governor; R. A. WEINERT, state senator; and LON A. SMITH, of the Texas Railroad Commission, were speakers at a recent barbecue dinner given by the Lockhart, Tex., chamber of commerce at the Caldwell County fairgrounds in honor of men active in developing the oil resources of Caldwell County. SENATOR C. F. RICHARDS was master of ceremonies, and more than 600 persons were present.

C. N. HUMPHREY, who was elected vice president of the Standard Oil Company of Nebraska last week to succeed H. W. PIERPONT, has been in the service of that organization 26 years. A native of Nebraska, he got his first job with the Standard of Nebraska in 1911 as a salesman. He made a very good record, and within six years had been advanced to assistant general manager. He held this position until promoted to the vice presidency. In that period the company's marketing and jobbing facilities have grown until now it operates 255 bulk stations.

C. H. WRIGHT, president of the Sunray Oil Company, has returned to Tulsa after an extended business trip in California.

BEN F. NYSEWANDER, JR., of Santa Barbara, Calif., is making an inspection of his producing properties in West Texas.

HAROLD B. FELL, Ardmore, Okla., executive vice president of the National Stripper Well Association, is taking a three months vacation in California.

OTTO KOCH, president of the Kendall Refining Company, Bradford, Pa., is reported recovering in a Cleveland, Ohio, hospital where he underwent an operation.

R. A. BROOMFIELD, executive vice president of the Barnsdall Oil Company, has sold his residence in Beverly Hills, Calif., and is building a new one in North Hollywood.

LOUIS N. WATERFALL, a member of the Union Oil Company's geological department for several years, has been appointed assistant chief geologist, with headquarters in Los Angeles.

H. B. DAVIDSON, employed in the Oklahoma state proration department, has been appointed chief clerk by the Corporation Commission to succeed E. G. DAHLGREN, who resigned July 1 to become oil umpire for Kansas.

W. W. JACOBS, of Ingleside, temporary president of the Employees Federation of the Humble Pipe Line Company in the Southwest Texas district No. 5, is conducting elections for permanent officers of the newly organized union. He is assisted by W. A. KELL of Harbor Island, temporary secretary of the organization.

So He Shifted Courses

If E. G. (Ty) Dahlgren, recently named director of the conservation department, Kansas, had not been selling books in West Virginia during his college vacation in 1926, he probably would have been a newspaperman. He was majoring in journalism at the University of Wisconsin, but while in West Virginia that summer oil and gas geology captured his interest, and upon returning to school in the fall he switched courses. Soon after graduating in 1929 with a B. A. in geology he got a position in the geological department of the Indian Territory Illuminating Oil Company in the Oklahoma City field. He remained with the company till January, 1931, when he entered proration work under Otto L. Bradford, Oklahoma City umpire. He had been chief clerk of the Oklahoma Corporation Commission since September 1, 1933, when he was appointed to his new post in Kansas.

E. G. DAHLGREN

They called him "Ty" (for Ty Cobb) because he was a corking good baseball player in his schooldays in Rice Lake, Wis., where he was born. The nickname stuck. His interest in sports remains high, but his particular hobbies are amateur motion picture photography and building up a petroleum library. He was co-author, with H. E. Rorschach, of "Petroleum Development in Oklahoma" for 1935 and 1936 for the A. I. M. E. He married Miss Esther Caughey in Madison, Wis. With their two children they will reside in Wichita, Kans.

W. B. IMBT, geologist for the Stanolind Oil & Gas Company, has been transferred from Midland, Tex., to Champaign, Ill.

MAX W. BALL, president of Abasand Oils, Ltd., Edmonton, Alberta, Canada, has been at his Denver, Colo., office for the past two weeks.

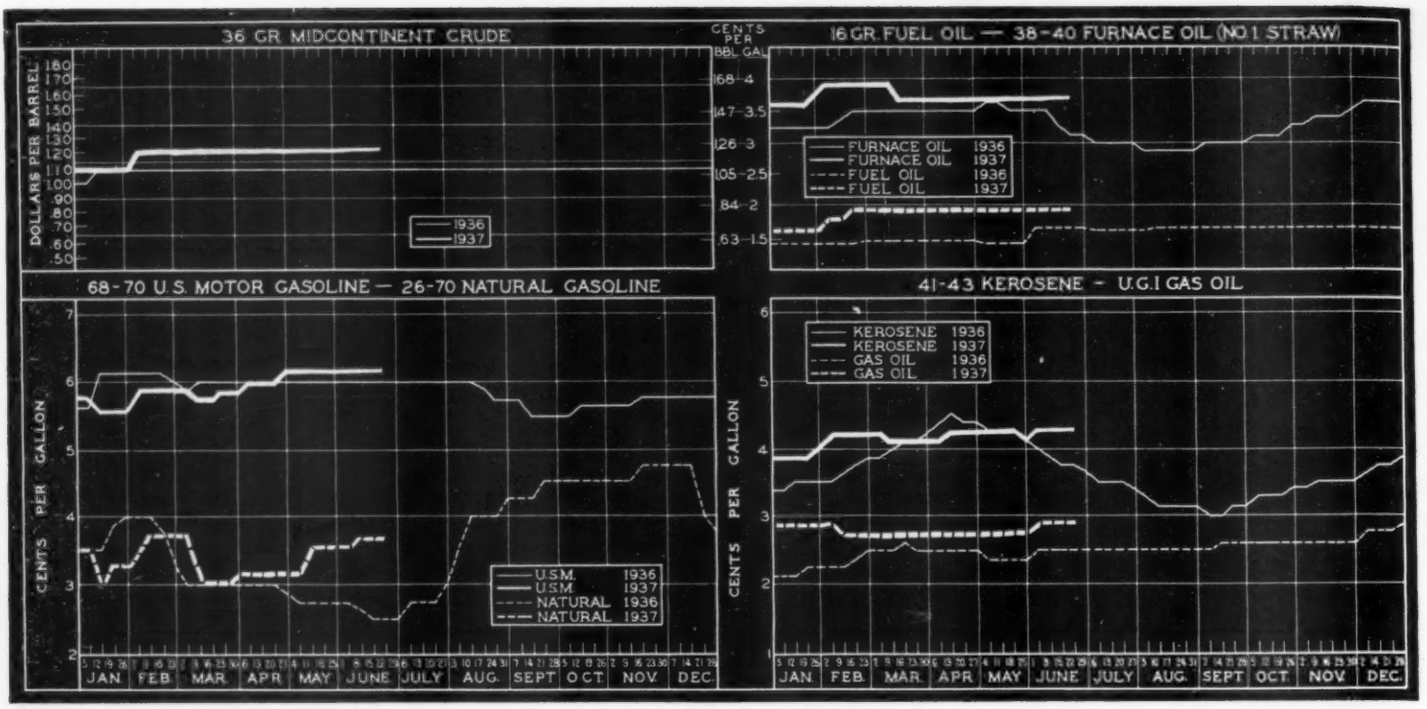
WALTER B. HEATHMAN, a member of the Union Oil Company's geological staff, has been transferred from the Los Angeles headquarters to Bakersfield during the absence of the resident geologist.

A. J. O'ROURKE, land man for the Skelly Oil Company in Kansas, has gone to California on a two weeks' vacation. JOE NEIDIG, of Great Bend, Kans., is looking after Mr. O'Rourke's work in the Wichita office.

H. W. OBORNE, consulting geologist and president of the Rocky Mountain Association of Petroleum Geologists, Colorado Springs, Colo., has been on a 10-day professional trip including Tulsa, Wichita, Kans., and other points in the Mid-Continent region.

W. C. HALL, formerly in the scouting and land department in Fort Worth, Tex., for the Continental Oil Company, has been transferred to Wichita Falls to scout the North Texas district. He replaces CARROLL MITCHELL, who was transferred to Amarillo.

BOB CURD now is scouting in North Texas for the Phillips Petroleum Company, with headquarters in Wichita Falls, taking the place of ED KEELER, who has been made head of the land department in that district. The company has moved its land and geological departments from Breckenridge to Wichita Falls.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Refiners in Group 3 Debate Whether Gasoline Tankcar Prices Will Hold

By T. F. SMILEY

Market interest in the Group 3 territory was divided this week between the striking performance of natural gasoline and disconcerting developments in motor fuel. The naturals have been straining at the leash and demand was so strong this week and offerings so scant that an upward movement in prices seemed likely. Reports concerning the gasoline market, dislocated by the recent cut of a half-cent in the tank-wagon price throughout Standard of Indiana territory, encouraged hope that tankcar prices would hold and that tank-wagon prices, energized by lively demand, might be restored to their former levels except in spots where pricecutting is particularly vicious.

Precedents Ignored

The buoyancy of the naturals brings out more distinctly than ever their departure from the pattern of other years. Export business, looked upon as a fugitive bit of good fortune when it gave the naturals an upward push last month, has not subsided, as many had expected it would. On the contrary the steady overseas and domestic demand has kept stocks down to such a level that far-sighted refiners are beginning to buy for their fall and winter requirements, convinced that 1937 will not witness the customary price dip. This is having the effect of tightening the market still further.

Natural gasoline manufacturers ordinarily have stored to the limit of their capacity in late spring and early summer. Not because they wanted to, but because there was not enough demand to absorb production. Also the large concerns bought and stored surplus stocks of small plants, to help prevent collapse of the market. This year export and coastwise shipments from the Gulf have kept Texas natural gasoline out of northern markets. Texas plants have been in a sold-up condition almost all the time, and Oklahoma plants have had the northern business devoid of Texas competition. In the past two weeks the shipments to Gulf ports have not only drained the tanks of Texas manufacturers, but they have begun to draw substantial volumes from Oklahoma plants.

Opinion was divided in the Group 3 gasoline trade as to whether tankcar prices would be able to resist the weakening influence of the tank-wagon pricecut. Many jobbers are protected by marginal contracts, and the turn affairs have taken subjects such jobbers to the temptation of acting as brokers and selling material to other jobbers and dealers who do not have contracts and buy in the open market.

A majority of sales managers, however, expressed the view that the mounting consumption of gasoline would neutralize all ill effects of the tank-wagon cut. Some expressed belief too that alleged trade practices which had impelled the Standard of Indiana to reduce tank-wagon prices in self-defense would be abandoned and that the old prices would be reinstated throughout most of Indiana's territory.

Another Triple Holiday

It was pointed out that another triple holiday lies just ahead. Independence Day falls on Sunday this year and will be celebrated on Monday. This doubtless will result in Saturday being observed as a full holiday in many cases. Jobber buying, which fell off sharply after the tank-wagon pricecut, has become brisk again. One large refiner, whose case is regarded as typical, said he was sold up for June and was trying to buy from other refiners to take care of additional business.

Wax was vigorous and belief was growing that it would not experience the usual summer slump. Kerosene was slightly easier. It and the tractor distillates are in the trough that lies between the end of the plowing season and the peak of harvest demand. Export orders for bright stocks were providing a satisfactory market, but neutrals continued quiet.

Refined Oil Market Barometer

Gasoline demand now assuming summer proportions. Hopefulness prevails that weakness in the price structure caused by tank-wagon pricecut in Standard of Indiana territory will be overcome by unprecedented consumption. Light fuel oils strong in eastern territory and holding well in other areas as a result of buying for fall.

MID-CONTINENT. Gasoline demand strong, but markets nervous. Naturals vigorous.

EAST COAST. Light fuel oils strong and industrial fuels firm. Gasoline improving.

GULF COAST. General market strong. Prices fairly steady.

CALIFORNIA. Fuel oil strong. Gasoline moving well, but tendency to shade prices.

PENNSYLVANIA. Gasoline strong. Kerosene and fuel oil moving well. Wax vigorous.

CHICAGO. Gasoline demand growing, but market uneasy. Kerosene quiet. Heavy fuels dull.

Light Fuel Oils Again Take Command of Market on North Atlantic Coast

By H. STANLEY NORMAN

NEW YORK, June 22.—While companies, jobbers and dealers were fortifying positions of their higher motor fuel structures last week, light fuel oil again took command of market interest following advances of a half to .55 of a cent by Standard Oil Co. of New Jersey along the Atlantic Coast.

Standard of New Jersey elevated tankcar prices on Essoheat light (No. 1 fuel oil) .55 of a cent per gallon at New York to a new level of 6.3 cents per gallon. Barge deliveries to resellers are quoted at an eighth of a cent below the New York tankcar market. Prior to the increase, No. 1 fuel oil was quoted by Standard of New Jersey at New York at 5.75 cents per gallon.

The No. 1 fuel oil price advance was extended to Norfolk, Charleston and Wilmington on a margin of a half cent per gallon making the new price at those points 6.25 cents per gallon, compared to previous quotation of 5.75 cents. The price advance at all Standard of New Jersey points was made effective June 18.

In view of the current tightness of the kerosene market on the Gulf Coast and continuation of the high rates applicable to clean tankers for cargo movement in coastwise traffic, other large refiners were expected to meet the advance on No. 1 oil by Standard of New Jersey. Suppliers have shown little interest in bidding for the open market business available to Gulf Coast plants at previous prices for kerosene. The product has also been closely held in the Pennsylvania district during the past three weeks.

Despite the current strength shown in No. 1 oil, rumors were current in New York that the contract prices for Nos. 2, 3 and 4 heating oils generally quoted at 7½ to 8½ cents per gallon for next winter delivery may be shaded somewhat as summer advances.

Other observers reported that the rumors were apparently born of the bearish elements in the fuel oil business and that the question of stocks failed to show a sound basis for the talk.

In support of the contention that No. 2, 3 and 4 fuel oil justifies its current market position, observers point to the new orders of 73,535 distillate oil burner units by manufacturers during the first four months of this year. During the same period in 1936, there was a total of 30,018 distillate burners ordered. The near shortage of distillate fuel oil last winter when the number of burner units was considerably below present total is still fresh in the minds of refiners. That a limited amount of fuel oil can be obtained this summer for next winter delivery at prices permitting jobbers to undersell the quotation of 7½ to 8½ cents per gallon is admitted by close observers. However, there probably are greater purchases of fuel oil currently by large refiners whose operating schedules will not produce their projected winter demands than at any time in history. The inter-refinery purchases are expected to keep the open market comparatively free of distress material throughout the summer fuel oil accumulation season.

Industrial fuels are comparatively strong, although no change has been reported in the past two or three weeks in the New York tankcar price. On the Gulf Coast, traders report that industrial grades of fuel oil are not available for less than 95 cents per barrel. Even at the current price on the Gulf Coast, refiners are not anxious sellers and a majority are supplying only their contract customers. The tanker rate on dirty boats for movement of fuel oil is holding a few cents per barrel under the clean tanker movement, but has maintained a firm to advancing trend despite the seasonal lethargy of movement into consuming channels.

Gasoline suppliers are in process of meeting another probable record breaking week-end demand immediately after turn of the half year. The triple holiday July 3, 4, and 5 for most city workers is expected to produce gasoline demand exceeding the triple holiday week-end at the end of May. Much of the gasoline intended to meet July 4 demand is now moving into hands of dealers. The extra supplies ordered out by most jobbers and dealers have firmly established the recent advance in motor fuel tankcar prices along the Atlantic seaboard from Philadelphia north to New York and extending up the coast to New England points.

A few companies are still asking 7½ cents for tankcar motor fuel delivery in New York while others are quoting 8 cents per gallon. Indications are, however, that material available for 7½ cents for 65 octane gasoline is somewhat limited and that quotations may level off at the higher figure before the end of June. Most suppliers are quoting 7.25 cents per gallon for 60-64 octane motor fuel in Philadelphia with 7.5 cents for 65 octane.

Gasoline available to open market traders in western Pennsylvania refinery district remains strictly limited. Several refiners in that district are unwilling to quote for open market sales and report they are pressed to take care of their contract customer requirements. Shipping instructions against previously placed contracts for motor fuel, both the U. S. Motor and the premium grade, are reported exceptionally heavy and probably reflect the preparation of jobbers and dealers to meet the July 4 week-end demand.

In addition to the week-end consumption in prospect for the start of July, turn of the half-year marks beginning of the most popular vacation season extending through the middle of September. In view of the increase in inquiries placed with oil company touring bureaus, the tourist trade will probably touch a new high in 1937. Consequently, dealers have a dual purpose in stocking ample supplies of motor fuel during the current week and that to follow, since the triple holiday will be followed immediately by greater day to day demand from vacationists.

There has been no change in the gasoline retail price structure during the past few weeks. The advance in northern New Jersey during the last week in May has been maintained, but elsewhere the fluctuation has been negligible. New York City stations are generally quoting $1.12 for six gallons of regular gasoline, including state, federal and city sales taxes.

There has been no recent change in lubricating oil quotations, although shipping instructions are currently reported more numerous than prevailed two and three weeks ago. Neutral oils are quoted from 23 to 30.5 cents per gallon, depending on viscosity, color, flash and other specifications. Cylinder oils are firm at 17 to 28.5 cents with some producers of low pourpoint bright stock quoting up to 29.5 cents per gallon. A slight revival of the export interest in bright stocks is reported, indicating that the supply from Russia made available to European purchasers during May is being depleted and that buyers are turning to this country for re-

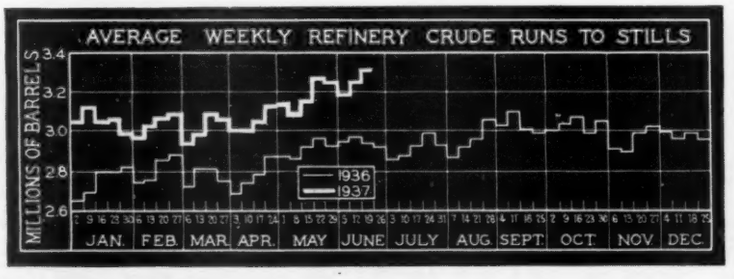
(Continued on Page 144)

A. P. I. Weekly Refinery Statistics

Week Ending June 19, 1937

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	566,000	18,853,000	8,069,000
Appalachian	88.4	115,000	2,939,000	707,000
Indiana, Illinois, Kentucky	92.1	455,000	13,435,000	5,556,000
Oklahoma, Kansas, Missouri	84.6	294,000	8,315,000	3,160,000
Inland Texas	56.6	152,000	2,005,000	1,734,000
Texas Gulf	95 5	691,000	9,603,000	7,103,000
Louisiana Gulf	96.3	140,000	1,655,000	2,131,000
North Louisiana and Arkansas	63.7	44,000	452,000	386,000
Rocky Mountains	69.7	40,000	2,004,000	747,000
California	90.9	562,000	13,903,000	67,452,000
Total reported	88.8	3,059,000	73,164,000	97,045,000
Estimated unreported	.....	261,000	3,410,000	2,170,000
*Estimated total	.....	3,320,000	76,574,000	99,215,000
*Estimated total previous week	.....	3,250,000	76,996,000	98,158,000
*June 20, 1936	.....	2,950,000	69,214,000	104,728,000

*Bureau of Mines, currently estimated.



Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATES)

Week ending June 5, 1937	307,223,000 barrels
Week ending May 29, 1937 (revised)	306,445,000 barrels
Week ending June 6, 1936	314,353,000 barrels

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of June 22, 1937

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Standard Oil Co. (Indiana)

	Gasoline Tank wag.	Gasoline Dlr	Gasoline Inc. tax	Kero. tank-wag.
Chicago, Ill.	15 5	13.5	4.0	10.1
Decatur	15 5	14 0	4 0	10.1
Joliet	15 5	14 0	4 0	10 1
Peoria	15 5	14.0	4 0	10 1
Quincy	15 3	13 8	4 0	9 9
Davenport, Ia.	15 5	14 0	4 0	‡13 1
Des Moines	15 3	13 8	4 0	‡12 9
Mason City	15.7	14 2	4 0	‡13 3
Sioux City	15 5	14 0	4 0	‡13 1
Duluth, Minn.	17 3	15 8	5.0	10.9
Mankato	16 9	15 4	5 0	10 5
Twin Cities	16 9	15 4	5 0	10 5
Lacrosse, Wis.	16 9	15 4	5 0	10 5
Green Bay	17 2	15 7	5 0	8 6
Milwaukee	16 8	15 3	5 0	10.4
Detroit, Mich.	15 4	13.9	4 0	9 8
Grand Rapids	16 5	15.0	4 0	10 9
Saginaw	16 3	14.8	4.0	8.5
Evansville, Ind.	17 0	15 5	5 0	†10.6
Indianapolis	17.2	15.7	5.0	†9.6
South Bend	17 4	15.9	5 0	†9 6
Fargo, N. Dak.	16 9	15 4	4 0	11.5
Minot	18 1	16 6	4.0	12.7
Huron, S. Dak.	17 3	15 8	5 0	10 9
Kans. City, Mo.*	14 9	13 4	4 0	8 9
St. Louis*	15 2	13 7	4 0	9 8
St. Joseph*	14 9	11.4	4.0	6.9
Wichita, Kans.	14.4	12.9	4 0	8.9

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Iowa kerosene prices include 3-cent state tax.

(Exclusive of state general sales taxes, except Indiana and South Dakota.)

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective Dec. 7, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.3 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex furnace oil, 1-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex A, 1-399 gallons, 5.75 cents; 400 gallons and over, 4.75 cents. Stanolex B, 1-799 gallons, 5.75 cents; 800 gallons and over, 4.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Tank wag. dlr.	Gasoline Tank car con'r.	Gasoline Inc. tax	Kero. tank-wag.
Atl'tic City, N. J.	13 0	11 5	4.0	8.0
Newark	13 0	11 5	4 0	8.0
Annapolis, Md.	15 1	13 6	5.0	10.0
Baltimore	14 5	13 0	5.0	8.5
Cumberland	16 9	14 4	5.0	10.0
Wash'g'n, D. C.*	12 5	11 0	3.0	9.0
Danville, Va.	17 7	15 2	6 0	12.9
Norfolk	16 5	14 0	6 0	11 5
Petersburg	16 8	14 3	6.0	11.7
Richmond	16 8	14 3	6 0	11 7
Roanoke	18 0	15 5	6.0	12.9
Charles'n, W. V.	16 3	13 8	6 0	12.6
Parkersburg	15 6	13 1	6 0	11.2
Wheeling	15 5	14 0	6 0	12.2
Charlotte, N. C.	18 9	16 4	7 0	13 6
Hickory	19 4	16 9	7 0	13 0
Mt. Airy	19 2	16 7	7 0	12 8
Raleigh	18 5	16 0	7 0	12 1
Salisbury	19 0	16 5	7 0	12.7
Charleston, S. C.	17 5	15 0	7 0	11.1
Columbia	18 5	16 0	7 0	12.1
Spartanburg	19 2	16 7	7 0	12 9

*Standard of N. J. has discontinued posting service-station prices at all above points except at Washington where a station price of 16 cents is in effect.

Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective May 15, 1937, in North and South Carolina, West Virginia and Virginia (except Arlington and Fairfax counties): Commercial consumers taking deliveries of 50 gallons (W. Va., 100 gallons) or more at one time will be billed at posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons (W. Va., 100 gallons) will be billed at 4 cents per gallon over posted consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline Tank wag.	Gasoline Net dlr.	Gasoline Inc. tax	Kero. tank-wag.
Atlanta, Ga.	21 0	18 0	7 0	*13 0
Augusta	21.0	18 0	7.0	*14.0
Macon	21 5	18.5	7.0	*14 5
Savannah	19.0	16.0	7.0	*12.0
Birm'ham, Ala.	21.0	18 0	8 0	12.0
Mobile	22 0	19 0	9 0	11 0
Montgomery	22.0	19.0	9.0	14.5
Jackson, Miss.	21 0	18 0	7.0	*13 0
Vicksburg	20 5	17 5	7 0	*13 0
Jacksonville, Fla.	20.5	17 5	8 0	11.0
Miami	20.5	17.5	8.0	†11.5
Pensacola	22 0	19 0	9 0	12 0
Tampa	21 5	18 5	8 0	11 0
Lexington, Ky.	20.0	17.0	6.0	11.0
Covington	19.5	16.5	6.0	11.0
Louisville	20.0	17.0	6.0	10.5
Paducah	20.0	17.0	6.0	8.0

Price basis to tank-wagon consumers: Effective January 4, 1937, 3 cents per gallon below tank-wagon price. Kerosene prices in all states subject to 2 cents discount except in Kentucky where prices are net.

*Includes 1-cent state tax. †Subject to 2-cent discount.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, and Tampa, Fla., have a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Dealer	Gasoline Inc. tax	Kero. tank-wag.
Denver, Colo.	17 5	5 0	11 5
Grand Junction	20 0	5 0	15 0
Pueblo	16 0	5 0	10 5
Casper, Wyo.	18 0	5 0	11 5
Cheyenne	18 0	5 0	13 0
Butte, Mont.	19 5	6 0	15 5
Billings	21 5	6 0	15 3
Helena	21 5	6 0	15.5
Great Falls	21 5	6 0	15 5
Salt Lake, Utah	19 5	5 0	16 0
Twin Falls, Ida.	21 5	6 0	18 0
Boise	21 5	6 0	18 0
Albuquerque, N. M.	17 5	6 5	12 0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Tank wag. con'r.	Gasoline Di-vided dlr.	Gasoline Inc. tax	Kero. tank-wag.
Ohio points	17 0	16 0	5 0	*13 5

*Includes state tax of 1 cent.

Divided dealer price is also price to authorized agents, exclusive of .5 cent rental. Tank-wagon price is price to commercial consumers in deliveries of 25 gallons or more; less than 25 gallons gets service-station price.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank-wag.
San Francisco	17 5	18 5	4 0	11 5
Los Angeles	17 0	18 0	4 0	9 0
Fresno, Calif.	18 5	19 5	4 0	12 0
Phoenix, Ariz.	21 0	22 0	6 0	‡16 0
Reno, Nev.	20 0	21 0	5 0	13 0
Portland, Ore.	20 0	21 0	6 0	13 5
Seattle, Wash.	20 0	21 0	6 0	13 5
Spokane	23 0	24 0	6 0	16 5
Tacoma	20 0	21 0	6 0	13 5

‡Includes 5-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Tank wag. dlr.	Gasoline Tank car con'r.	Gasoline Inc. tax	Kero. tank-wag.
Albany, N. Y.	15 0	13 5	5 0	8 25
*Met. N. Y.:				
Manh't'n, Br'nx	14 5	13 0	5 0	7 75
Staten Island	14 75	13 0	5 0	7 75
Q'ns & Brklyn	14 5	13 0	5 0	7 75
Buffalo	15 3	13 67	5 0	8 00
Rochester	15 3	13 74	5 0	8 25
Syracuse	15 3	13 7	5 0	9.00
Boston, Mass.	14 0	12 5	4 0	7 50
Portland, Me.	15 8	13 5	5 0	8 50
Manch'ter, N. H.	16 3	14 0	5 0	8 50
Burlington, Vt.	15 9	13.9	5.0	8.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Price basis to undivided dealer: Posted dealer tank-wagon price less .5 cent. Price basis to commercial consumer: Effective Nov. 15, 1936, monthly purchases of 25,000 gallons and over, consumer tankcar prices at delivery point plus .5 cent per gallon; monthly purchases of 5,000 to 25,000 gallons, undivided dealer price at delivery point: Monthly purchases under 5,000 gallons, pay divided dealer tank-wagon price at delivery point.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank wag.	Gasoline Dlr	Gasoline Inc. tax	Kero tank wag
Omaha	17 9	16 4	6 0	10 4
McCook	18 0	17 1	6 0	10 0
Norfolk	18 3	16 8	6 0	11 2
North Platte	18 7	17 2	6 0	11 2
Scotts Bluff	19 4	17 9	6 0	10 9

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract effective Jan. 1, 1935.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline Dealer	Gasoline Inc. tax	Kero tank wag
Muskogee, Ok.	15 0	5 0	7 0
Oklahoma City	15 0	5 0	8 0
Tulsa	14 0	5 0	7.0
Ft. Smith, Ark.	15 0	5 0	10.0
Little Rock	17 5	7 5	9 5
Texarkana	15 0	5 0	9 0

Texas

	Gasoline Tank wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero tank wag
Dallas, Tex.	14 0	18 0	5 0	8 0
Fort Worth	14 0	18 0	5 0	8 0
Houston	14 5	18 5	5 0	8 0
San Antonio	14 5	18 5	5 0	8 0

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Tank wag. dlr.	Gasoline Tank car con'r.	Gasoline Inc. tax	Kero. tank-wag.
N. Orleans, La.	20 0	17.5	*10.0	†14.0
Baton Rouge	18 0	15 5	8 0	12.0
Alexandria	18 5	16.0	8.0	12.0
Lafayette	19 0	16 5	8.0	12.5
Lake Charles	19 0	16.5	8 0	12.5
Shreveport	17 5	15 0	8 0	9.5
Knoxville, Tenn.	21 0	18.5	8 0	14.0
Memphis	19 0	16.5	8 0	12.0
Chattanooga	20 5	18 0	8 0	13 5
Nashville	20 0	17 5	8 0	11 0
Bristol	19.75	18.5	8.0	14.5

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax.

Standard of La. has transferred all stations to dealers except in New Orleans and Baton Rouge where station prices are 23.5 and 21.5 cents per gallon, respectively.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one delivery takes posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Louisiana kerosene prices include 1-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline Tank wag. dlr.	Gasoline Tank car con'r.	Gasoline Inc. tax	Kero. tank-wag.
Philadelphia, Pa.	14 0	12 5	5 0	10.8
Pittsburgh	15 5	13 5	5 0	11.0
Allentown	14 5	13.25	5.0	11.0
Erie	14 5	13 0	5.0	10.0
Scranton	14 5	13 25	5 0	11.0
Altoona	15 5	13 5	5 0	11.0
Dover, Del.	14 5	....	5.0	11.0
Wilmington	13 5	....	5 0	11.0
Springf'ld, Mass.	14.8	....	4.0	7.8
Worcester	14 3	....	4 0	8 0
Hartford, Conn..	14 6	....	4 0	7.0
New Haven	14 0	....	4 0	7.0
Providence, R. I.	13 0	....	3.0	7.75

Atlantic has transferred all stations to dealers except in Philadelphia and Pittsburgh where prices are 17.5 and 20.0 cents per gallon respectively.

Price basis to undivided dealers—Dealer tank-wagon less .5 cent per gallon.

Consuming accounts not under contract—when made by tank-wagon in quantities of 50 gallons or over, dealer price.

Commercial accounts under contract—annual consumption 2,500 to 100,000 gallons per year, 1 cent above posted tankcar price; over 100,000 gallons per year, .5 cent above posted tankcar price.

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15 7
V.M.&P. naphtha	16 0
Cleaners' naphtha	15 0
Stanisol	15 0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b Chicago. Each price subject to discount of 1 cent per gallon for 150 gallon lots if covered by contract.

Canada*

3 Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wag
Halifax, N.S.	24 0	8 0	18 5
St. John, N.B.	24 0	8 0	18 5
Montreal, Que.	20 0	6 0	17 5
Toronto, Ont.	22 0	6 0	17 0
Hamilton, Ont.	22 0	6 0	17 0
Winnipeg, Man.	28 2	7 0	20 7
Brandon, Man.	29 8	7 0	22 3
Regina, Sask.	29 5	7 0	22 0
Saskatoon, Sask.	32 3	7 0	24 8
Edmonton, Alta.	30 5	7 0	24 2
Calgary, Alta.	28 0	7 0	21 5
Vancouver, B.C.	23 0	7 0	23 0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon price. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Leases Its Stations

Following the plan adopted by integrated oil companies in this country, Imperial Oil, Ltd., has leased all its service stations to dealers and now quotes tank-wagon prices only.

New York Market

(Continued from Page 143)

placements. The export business, however, is still short of what it was during March and April, according to current reports.

Interest in wax is reported increasing almost weekly. Buyers are bidding prices up to as high as 3 cents per pound for 124-126 white scale material, but suppliers are still reluctant sellers. Fully refined wax is reported scarce for open market trading. Suppliers of practically all grades of wax appear content to ship on instructions from regular customers at current prices, but are not active in seeking open market business until the market improves.

The Bunker C fuel oil market is unchanged in New York harbor with suppliers quoting from $1.35 to 1.50 per barrel. Most sales are made at the lower figure, but in many instances the suppliers are out of the open market.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of June 22, 1937

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 oct. and below (3d gr.)	.05½	.05¼
63-67 octane	.05½	.05⅝
68-70 octane (regular)	.06⅛	.06¼
60-62 400 grades:		
62 oct. and below (3d gr.)	.05¼	.05⅜
63-67 octane	.05½	.05⅝
68-70 octane (regular)	.06⅛	.06¼
64-66 375	.05¼	.05⅜
68-70 360	.05¼	.05½

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.05½	.05⅝
63-67 octane	.05½	.05⅝
68-70 octane (regular)	.06⅛	.06⅜
60-62 400	.05⅛	.05¼
64-66 375	.05⅛	.05¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:	
62 octane and below	.05⅝
63-67 octane	.06
68-70 octane (regular)	.06½

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:	
62 octane and below	.05½
63-67 octane	.06⅛ .06¼
68-70 octane (regular)	.06½

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.05⅛	.05¼
63-67 octane	.05½	.05⅝
68-70 octane (regular)	.06⅛	.06¼
60-62 400 grades:		
62 octane and below	.05⅛	.05¼
63-67 octane	.05½	.05⅝
68-70 octane (regular)	.06⅛	.06¼
64-66 375	.05⅛	.05¼
68-70 360	.05¼	.05⅜

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:	
Below 60 octane	.06
60-64.9 octane	.07⅜
65-70 octane	.07½
64-66 375	.06⅛
68-70 350	.06¼

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07½	.08½
58-60 400, 65 oct. and higher	.08¼	.09¼

EAST COAST (domestic)—

U. S. Motor below 60 octane:		
*New York (Bayonne)		.06¾
Baltimore		.06¾
U. S. Motor, 60-64.9 octane:		
*New York (Bayonne)	.07	.07¼
Philadelphia	.07	.07¼
Boston		.07¼
Baltimore	.07	.07¼
Charleston, S. C.		.07¼
U. S. Motor, 65 and above:		
*New York (Bayonne)	.07½	.08
Philadelphia	.07¼	.07¾
Boston	.07½	.08
Baltimore		.07½
Charleston, S. C.		.07½

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.06	.06⅛
60-64.9		.06¼
65 octane and higher		.06½

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05⅝
52-54 450 (blending)	.05⅝
54-56 450 (blending)	.05¾

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.03⅝
Grade 18-55	.04⅜	.04½

NORTH TEXAS—

Grade 26-70		.03⅝
Grade 18-55	.04⅜	.04½

CALIFORNIA—

75-85 375-390	.06¾	.07½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.03⅞	.04

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.04¼	.04⅜
41-43 gr., 300-350 i.b.p., 110-125 flash, 500-520 e.p.	.04⅜	.04½
46-48 gr., 210-230 i.b.p., 480 max. e.p.	.04⅞	.05

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.04¼	.04⅜
42-44	.04⅜	.04½

NORTH TEXAS—

41-43	.04⅜

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.04½	.04⅝

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04¾

PENNSYLVANIA (inland refineries)—

45	.04¾
46	.04⅞
47	.05

CHICAGO (Based on Group 3)—

41-43	.04¼	.04⅜
42-44	.04⅜	.04½

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04	.05

NEW YORK (Bayonne, N. J.)—

41-43	.05½	.05¾

***GULF COAST (domestic)—**

41-43	.04⅞	.05

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03¾	.04
No. 1 straw, 38-40	.03⅝	.03⅞
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03⅜	.03½
No. 3, zero to 15, 28-32	.03¼	.03⅜
No. 3, 15 and above, 28-32	.02⅝	.02⅞

NORTH TEXAS—

No. 1 prime white, 38-42		.04
No. 1 straw, 38-40	.03⅝	.03⅞

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03¾	.03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36	.03⅝	.03¾

CHICAGO (based on Group 3)—

No. 1 prime white, 38-40	.03⅞	.04
No. 1 straw, 38-40	.03⅝	.03¾
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03⅜	.03½
No. 3, zero to 15, 28-32	.03¼	.03⅜
No. 3, 15 and above, 28-32	.02⅝	.02¾

NEW YORK (Bayonne, N. J.)—

*No. 1		.05¾
*No. 2	.05¾	.05⅝
*No. 4	.05⅛	.05⅝

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal.; fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02⅞	.03⅛
No. 4, low cold test, 24-28	1.07½	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.87½	.90
Below 18 fuel oil, industrial	.80	.87½

NORTH TEXAS—

U.G.I. gas oil	.02¾	.03⅛
No. 4, low cold test, 24-28	1.07½	1.12½
No. 5, low cold test, 18-22	.87½	.90
Below 18 fuel oil, industrial	.80	.85

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

10-14 fuel oil, industrial	.80	.85

ARKANSAS (Ark., N. La., and Miss. delivery)—

10-14 fuel oil, industrial	.70

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅞	.03
No. 4, low cold test, 24-28	1.07½	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.87½	.90
No. 6, low cold test, 10-16	.80	.85

PENNSYLVANIA (inland refineries)—

36-40	.04⅜	.04½

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	1.15	1.35
24 plus diesel, per bbl.	1.17	1.35
24 plus diesel (bunkers)	1.50	1.65
12-16 (bunkers at tidewater)	1.05	1.20
10-16 (cargo lots)	.95	1.10
12-17 (tankcars)	1.00	1.15
10-17 (high sulfur)	.60	.90
San Joaquin Valley:		
10-18 (tankcars)	.80	1.00
24 plus diesel, per bbl.	1.45	1.65
San Francisco:		
27 plus diesel		1.65
24 plus diesel (bunkers)		1.70
10-16 (bunkers)		1.15

GULF COAST—

28-30 gas oil	.04⅛	.04¼
28-30 diesel (bunkerage)	1.65	1.90
Bunkers (bulk cargoes)		.95
Bunker C (bunkers)		1.05

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04¾
28-30 diesel (lighterage 6¼-per bbl.)		2.20
28-30 diesel (tankcars)		.05
Bunker C (to ocean-going ships in N. Y. harbor)	1.35	1.50
Industrial fuel (tankcars)		.04½

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

Bright Stocks:	
190-200 D, 15-25	.23
150-160 D, 0-10	.20
150-160 D, 15-25	.19½
150-160 E, 15-25	.19
100-110 D, 0-10	.18
Steam refined:	
631 green (treated)	.17½
600 dark green (untreated)	.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 145-50 at 210, 540-550 flash):	
10 pour test	.27 .27½
15 pour test	.26 .26½
20 pour test	.25 .25½
25 pour test	.24 .24¼
Steam refined:	
600	.16
650	.18
600 Pennsylvania flash	.19
630 flash	.23
600 Warren E filtered	.19

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:	
150-3	.09
180-3	.10
180-4	.09½
200-3	.10½
200-4	.10
250-3	.11½
250-4	.11
280-3	.12½
280-4	.12
300-3½	.13
400-3½	.14
100-2½ paraffin oil	.05¾
15-20 Cold Test:	
200-3	.10
200-4	.09½
250-3	.11
250-4	.10½
280-3	.12
280-4	.11½

GULF COAST—

Pale Oils:		
200-3	.07	.07¼
300-3	.07½	.07¾
500-3½	.08½	.08¾
750-3½	.08⅝	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red Oils:		
200-5-6	.07¼	.07½
300-5-6	.07¼	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3	.07	.08
200-2½-3	.07	.08
300-2½-3	.07	.08
400-3-4	.09	.11
540-3-4	.09	.11
550-3-4	.09	.11
600-3-4	.09	.11
Red Oils:		
200-4-5	.07	.08
300-5-6	.07	.08
350-5-6	.10½	.11½
400-5-6	.10½	.11½
450-5-6	.10½	.11½
500-5-6	.10½	.11½
600-5-6½	.10½	.11½
700-6½ plus	.10½	.11½
750-6½ plus	.10½	.11½
900-6½ plus	.10½	.11½

PENNSYLVANIA—

150 vis. at 750° F. color, 400-405 flash:		
Zero pour test	.24½	.25
10 pour test	.23½	.24
15 pour test	.23	.23½
25 pour test	.22	.22½
180 vis. at 70° F., 3 color:		
25 pour test	.25	.25½
200 vis. at 70° F., 3 color:		
Zero pour test	.29	.29½
10 pour test	.28	.28½
15 pour test	.27½	.28
25 pour test	.26½	.27

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02⅞	.03

PENNSYLVANIA (Inland refinery)—

122-124 (a.m.p.) w.c. scale	.0290	.0295
124-126 (a.m.p.) w.c. scale	.0295	.0300

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0250	.0255
124-126 (a.m.p.) y.s.	.0260	.0265
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06¾
Snow white	.07¾	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.06	.06¼
60-62 400		.06¼
61-63 390		.06½
64-66 375	.06⅛	.06½

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04¾
55-65 octane	.04¾	.05
65-67 octane		.05
67-69 octane		.05¼
Above 69 octane	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white	.04⅞	.05
41-43 water white		.05
44 water white	.04¾	.05

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.26½	.27
600 S.R. unfiltered	.24	.24½
630 S.R. unfiltered	.25½	.26
600 flash, S.R.	.26½	.27
630 flash, S.R.	.31½	.32
Bright Stocks:		
8 color	.32	.32½
6½ plus color in dilution	.31½	.32

NEUTRAL OIL

200-3 color	.34	.34½
150-3 color	.29½	.30

PARAFFIN WAX

NEW YORK (prices per pound)—

123-126 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0260	.0270
124-126 y.s.	.0245	.0250

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 28, 1937)

East Texas (May 22, 1937)*	$1.35
Van, Tex.†	1.10
Camp Hill, Tex.	1.27
Cass County, Tex.‡	1.25
Talco	.73
Altus and Tipton, Okla.§	1.20
Other fields (see gravity table).	

*All companies. †Humble Oil & Refining Co.; Pure Oil Co. ‡Texas Co. §Gulf Oil Co. Talco by Humble Oil & Refining Co.

West Texas

See gravity table.

Pecos County*	.91
Pecos shallow†	.81

*Shell Petroleum Co., Gulf Pipe Line Co., and Humble Oil & Refining Co. †Shell Petroleum Corp.

Gulf Coast

(January 28, 1937)

Choctaw and Darrow, La.	See note below
Clay Creek, Tex.	$1.00
Garden Island, La.	1.37
Cleveland, Tex.	1.27
Hardin, Tex.	1.15
Tomball, Tex.	1.30
Lafitte, La.	1.24
Livingston, Tex.	1.27
Satsuma	1.20
Heyser, light (Nov. 1, 1936)	1.15
Heyser, heavy (Nov. 1, 1936)	.90
Placedo (Nov. 1, 1936)	.90
Welsh, La.	.98
Tepetate (La.) (Jan. 4, 1937)	1.12

Greta, Refugio, O'Connor, McFadden, Saxet, Segno, Taft, Tomoconnor and Plymouth take same gravity prices as Gulf Coast, Duval, Jim Hogg, Webb and Zapata counties, Texas, and Heyser and Placedo fields take Mirando gravity prices. Jennings, La., 5 cents lower than Gulf Coast prices on each degree. Segno, Texas, takes Gulf Refining Co.'s Gulf Coast prices. Choctaw and Darrow, Louisiana, posted for first time by Standard Oil Co. of Louisiana, start below 21 degrees at 90 cents, with 3-cent differential up to 25 gravity, then 2-cent differential up to 40 and above, $1.36.

Rocky Mountain States

(Effective January 28, 1937)

Iles, Colo., light*	$1.18
Iles, Colo., heavy*	1.12
Greybull, Wyo.*	1.30
Torchlight, Wyo.*	1.30
Grass Creek, Wyo., light.*†	1.30
Grass Creek, Wyo., heavy (Nov. 4, 1936)*†	.62
Hamilton Dome, Wyo. (Nov. 4, 1936)*	.57
Elk Basin, Wyo., light*†	1.30
Frannie, Wyo., heavy*	.62
Frannie, Wyo., light	.82
Hogback, N. Mex.*	1.33
Pondera, Mont. (Jan. 26, 1936)*	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.23
Rock Creek, Wyo.†	1.20¼
Lea County, N. M. (see West Texas gravity table).	
Artesia, N. Mex.	.90
Maljamar, N. Mex.	.90
Canon City and Florence, Colo.	1.10
Florence, Colo.	.98
Lance Creek, Wyo.	.97
Sunburst, Mont. (June 5, 1936)	1.20
Cat Creek, Mont.	1.40
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Middle Western States

OHIO OIL CO.
(Effective January 28, 1937)

Lima	1.25
Illinois	1.35
Princeton, Ind.	1.35
Midland, Mich.	1.42
West Branch, Mich.	1.26
Buckeye (March 16, 1937)	1.39¼
Arenac, Mich.	1.26
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River	1.42
Kentucky River	1.50
Western Kentucky	1.40

Midland, Mich., price posted by Simrall Corp. and Pure Oil Co. includes Greendale, Porter, Beaverton, Crystal and equal grades. West Branch and Arenac by Simrall Corp., effective January 29. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Buckeye posted by Simrall Corp. and Pure Oil Co.

Southwest Texas

(January 28, 1937)

Pettus	1.37
Salt Flat, Darst Creek, Hilbig, Carroll Clark, Zoboroski	1.09
Luling	1.00
Lytton Springs	1.12

Saxet and Taft take same gravity table as Gulf Coast.

North Louisiana and Arkansas

Smackover, all grades	$ .90
Tullos and Urania	1.02
El Dorado East field	.90
Union County, Ark.	.90
Ouachita County, Ark.	.90

Eastern States

TIDE WATER PIPE LINE CO.
(Effective June 7, 1937)

Bradford, Pa.	$2.82
Allegany, N. Y.	2.82

SOUTH PENN OIL CO.
(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.82
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.57
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.52
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.37
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Jan. 29, 1937)	1.42

PENNZOIL CO.
(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	2.82
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.81
Includes Tidioute district.	
Group C	2.80
Includes Turkey and Tidioute districts.	
Group D	2.79
Includes Bear Creek and Porkey districts.	
Group E	2.76
Includes Eideneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	

Price depends on lengths of pipe line haul to plant at Oil City.

PURE OIL CO.
(Effective June 7, 1937)

Cabin Creek, W. Va.	2.52
Bradford Hollow, W. Va.	2.52
Kelly Creek, W. Va.	2.52

Canada

Ontario (Sept. 9, 1933)*	
Petrolia	$2.10
Oil Springs	2.17
Turner Valley, Alberta province (Dec. 16, 1936):†	
Clear naphtha	$2.60
Discolored naphtha, 65 gravity and higher	2.36
Discolored naphtha and crude oil, 40-40.9 gravity	1.85
Increasing 3 cents for each degree of gravity with top price for 64-64.9 gravity	2.27

These prices delivered field tankage.
*Imperial Oil, Ltd.
†Imperial Oil, Ltd., and Regal Oil & Refining Co. On crude oil alone British American Oil Co. posted above prices on December 9, 1936.

Mexico

Panuco*	$1.34

*In U. S. currency, f.o.b. ship, based on April spot market transactions.

Rocky Mountain Runs

Estimated daily average production in the week ending June 19:

WYOMING	
Salt Creek	16,490
Big Muddy	1,340
Badger Basin	200
Dallas Derby	550
Elk Basin	650
Frannie	410
Garland	2,700
Grass Creek	4,460
Hamilton dome	360
Hidden dome	470
Hudson	270
LaBarge	830
Lance Creek	11,840
Lost Soldier	1,230
Medicine Bow	2,790
Oregon Basin	2,770
Osage	750
Quealy dome	580
Rock River	1,220
Poison Spider	240
Wertz	450
Waugh dome	290
Miscellaneous	190
Total Wyoming	51,080
MONTANA	
Border	180
Cat Creek	640
Cut Bank	10,400
Dry Creek	40
Kevin-Sunburst	5,000
Lake Basin	20
Pondera	1,080
Total Montana	17,360
COLORADO	
Florence	160
Fort Collins and Wellington	260
Iles dome	2,500
Moffat	390
Orchard	40
Rangely	80
Tow Creek	190
Total Colorado	3,620
NEW MEXICO	
Cooper	6,780
Eaves	1,150
Eunice	32,380
Hardy	1,120
Hobbs	21,500
Jal	1,190
Langlie	1,670
Lynch	870
Lynn	870
Mattix	1,370
Monument	33,280
North Lynch	60
Penrose	2,460
Rhoades	50
Skelly	1,150
South Eunice	1,460
Vacuum	10
Artesia-Maljamar	6,800
Getty	200
Hogback	200
Rattlesnake	610
Table Mesa	90
Total New Mexico	115,270
Total Rocky Mountain region	187,330

Crude Prices by Gravities

	Oklahoma-Kansas	Oklahoma-Kansas	North and Central Texas	East Central Texas (Mexia district)	North Louisiana-Arkansas	Gray County, Texas	Hutchinson-Carson counties, Texas	Rodessa, Louisiana-Texas and Panola County, Texas	Conroe, Tomball, Raccoon Bend, Satsuma, Texas	Gulf Coast	Gulf Coast	West Texas except Pecos County, N. Mex. Lea County, N. Mex.	Mirando district, Texas	Marion County, Texas	Government Wells, Texas	Anahuac, Texas	White Castle, Louisiana	Iowa, Louisiana	Cayuga, Texas
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Bel. 18	....	....	....	....	....	....	....	....	....	$.90	....	....	....	....	....	....	....	....	....
18-18.9	....	....	....	....	....	....	....	....	....	.92	....	....	....	....	....	....	....	....	....
19-19.9	....	....	....	....	....	....	....	....	....	.94	....	....	....	....	....	$.92	$.94	$.84	....
20-20.9	....	....	....	....	....	....	....	....	....	.96	$.95	....	$.90	....	$.90	.94	.96	.86	....
21-21.9	....	....	....	....	....	....	....	....	....	.98	.98	....	.93	....	.93	.96	.98	.88	....
22-22.9	....	....	....	....	....	....	....	....	....	1.01	1.01	....	.96	....	.96	.98	1.01	.91	....
23-23.9	....	....	....	....	....	....	....	....	....	1.04	1.04	....	.99	....	.99	1.00	1.04	.94	....
24-24.9	....	....	....	....	....	....	....	....	....	1.07	1.07	....	1.02	....	1.02	1.02	1.07	.97	....
Bel. 25	....	$.98	....	....	$.90	....	....	$.93	....	....	....	....	....	$.90	....	....	....	....	$.88
25-25.9	....	1.00	....	....	.92	....	....	.95	....	1.10	1.10	$.78	1.05	.92	....	1.04	1.10	.99	.90
26-26.9	....	1.02	....	....	.94	....	....	.97	....	1.13	1.13	.80	1.08	.94	....	1.06	1.13	1.03	.92
27-27.9	....	1.04	....	....	.96	....	....	.99	....	1.15	1.15	.82	1.10	.96	....	1.08	1.15	1.05	.94
28-28.9	....	1.06	....	....	.98	....	....	1.01	....	1.17	1.17	.84	1.12	.98	....	1.10	1.17	1.07	.96
Bel. 29	$1.06	....	$.96	$1.03	....	....	....	....	$1.20	....	....	....	....	....	....	....	....	....	....
29-29.9	1.08	1.08	.98	1.05	1.00	....	....	1.03	1.22	1.19	1.19	.86	1.14	1.00	....	1.12	1.19	1.09	.98
30-30.9	1.10	1.10	1.00	1.07	1.02	....	....	1.05	1.24	1.21	1.21	.88	1.16	1.02	....	1.14	1.21	1.11	1.00
31-31.9	1.12	1.12	1.02	1.09	1.04	....	....	1.07	1.26	1.23	1.23	.90	1.18	1.04	....	1.16	1.23	1.13	1.02
32-32.9	1.14	1.14	1.04	1.11	1.06	....	....	1.09	1.28	1.25	1.25	.92	1.20	1.06	....	1.18	1.25	1.15	1.04
33-33.9	1.16	1.16	1.06	1.13	1.08	....	....	1.11	1.30	1.27	1.27	.94	1.22	1.08	....	1.20	1.27	1.17	1.06
34-34.9	1.18	1.18	1.08	1.15	1.10	....	....	1.13	1.32	1.29	1.29	.96	1.24	1.10	....	1.22	1.29	1.19	1.08
Bel. 35	....	....	....	....	....	$.96	$.91	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1.20	1.20	1.10	1.17	1.12	.98	.93	1.15	1.34	....	1.31	.98	1.26	1.12	....	1.24	....	1.10	....
36-36.9	1.22	1.22	1.12	1.19	1.13	1.00	.95	1.17	1.36	....	1.33	1.00	1.28	1.14	....	1.26	....	....	....
37-37.9	1.24	1.24	1.14	1.21	1.16	1.02	.97	1.19	1.38	....	1.35	1.02	1.30	1.16	....	1.28	....	....	....
38-38.9	1.26	1.26	1.16	1.23	1.18	1.04	.99	1.21	1.40	....	1.37	1.04	1.32	1.18	....	1.30	....	....	....
39-39.9	1.28	1.28	1.18	1.25	1.20	1.06	1.01	1.23	1.42	....	1.39	1.06	1.34	1.20	....	1.32	....	....	....
40,over	1.30	1.30	1.20	1.27	1.22	1.08	1.03	1.25	1.44	....	1.41	1.08	1.36	1.22	....	1.34	....	....	....

Column 1—Companies posting are Barnsdall, Bell, Champlin, Continental, Cushing, Derby, Dickey, Eason, El Dorado, Empire, Falcon, Globe, Gulf, Johnson, Kanotex, National, Phillips, White Eagle, Stanolind, Sunray, Texas, Sun, Vickers and Wilcox.
Column 2—Anderson & Prichard, Carter, Cosco, Deep Rock, Magnolia, Mid-Continent, Pure, Rock Island, Shell, Sinclair, Skelly and Tide Water.
Column 3—All purchasers.
Column 4—Humble Oil & Refining Co. and Sinclair Crude Oil Purchasing Co.
Columns, 5, 6, 7 and 8—All purchasers.
Column 9—Humble Oil & Refining Co. and Sun Oil Co. Tide Water Oil Co.'s schedule starts at 35 degrees, $1.34 with 2-cent spread up to 40 and over at $1.44. (Raccoon Bend prices are for deep sand oil.)
Column 10—The Texas Co. (Gulf Refining Co. pays same prices up to and including 34 gravity, but continues its 2-cent spread up to 40 and over at $1.41.)
Column 11—Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Sun Oil Co.
Column 12—All purchasers.
Column 13—Humble Oil & Refining Co.
Column 14—Magnolia Petroleum Co.
Column 15—Sun Oil Co.
Column 16—Gulf Refining Co.
Columns 17 and 18—Shell Petroleum Corp.
Column 19—Tide Water Oil Co.

Texas Wildcats

(Continued from Page 138)

Stonewall County

General Crude Oil Co. No. 1 W. J. Bryan, 7 mi. N Hamlin, Subd. 10, Wm. Vardeman Sur. No. 347. Drlg. 2,740 ft.

Tarrant County

E. E. Hoffpauir et al No. 2 W. H. Davis, 2 mi. S Arlington, H. Blackwell Sur. S.D.O. 2,140 ft.

Throckmorton County

Long & Bedner No. 1 Everett, 9 mi. S Throckmorton, 1,836 ft. fr. S & 400 ft. fr. W of sec. 1,615 T.E.&L. Old well being redrilled.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1937 High	1937 Low	Week ended June 19 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
114⅞	87	1,200	88	87	88	Amerada Corp.	788,675	N.P.	50cQ	1-30-37	$2.00	125½	75	80	48½
37	27⅜	7,000	28¾	27⅜	28⅛	Atlantic Refining	2,664,000	$25	25cQ	6-15-37	1.25	35⅛	26⅝	28	20½
43⅜	28¾	2,400	30⅛	28¾	29¼	Barber Co.	387,149	$10	25c.	6-1-37	.50	38½	21	22½	11¾
35¼	24¼	12,800	25¾	24⅜	25⅛	Barnsdall Oil Co.	2,247,974	$5	25cQ	5-1-37	.80	28¼	14⅛	14¾	5⅞
20⅞	10	35,700	11½	10	11⅛	Columbia Gas & Elec.	11,610,036	N.P.	20c	11-16-36	.40	23⅜	14	15⅜	3⅜
17⅞	14½	37,800	15¾	14½	15⅝	Consolidated Oil Corp.	13,919,417	N.P.	20cQ	8-14-37	.80	17¼	11½	12¼	6½
47⅜	39¾	13,700	43¾	40⅝	43⅜	Continental Oil of Delaware	4,682,615	$5	50cQ†	6-30-37	1.50	44⅞	28⅛	35	15⅛
17⅝	12½	14,500	14⅞	13⅝	14½	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	13⅞	6⅜	7	1½
35⅜	25⅛	5,500	27¼	25⅛	26⅞	Mid-Continent Petroleum	1,855,912	$10	50cSA	6-15-37	1.15	30⅞	17¼	20½	9½
34	23⅞	1,400	26¼	23⅞	26	Mission Corporation	1,399,345	N.P.	....	....	.45	29⅞	16¾	17¾	10⅝
109⅞	62	2,300	100	97	98	National Supply of Delaware	382,591	$25	....	5-15-31	....	75½	19⅞	20⅞	9
22⅞	17⅛	21,700	19	17⅜	18⅞	Ohio Oil Co.	6,563,377	N.P.	50cSA	6-15-37	.60	18	12⅛	14¼	9¼
29¾	20¾	1,100	23¼	22⅜	23	Pacific Western Oil	1,000,000	N.P.	65c	12-18-36	.65	23½	11⅜	14	6⅜
4½	2½	1,700	2⅜	2½	2⅝	Panhandle P. & R.	198,770	N.P.	....	....	....	4¼	1⅜	1⅞	½
59¼	49½	12,600	54⅜	52	54⅜	Phillips Petroleum	4,449,052	N.P.	75cQ†	6-1-37	2.50	52⅜	38⅛	40	13⅜
29⅞	24¼	5,000	26½	25¼	26¼	Plymouth Oil Co.	1,050,000	$5	35cQ†	3-31-37	.90	27⅜	11⅞	13	6½
24⅜	16⅝	55,500	17⅜	16⅝	17⅝	Pure Oil Co.	3,281,120	N.P.	....	9-1-30	....	24⅞	16	17	5⅞
54⅛	36⅝	4,800	40¾	38⅝	40½	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	6-15-37	1.00	44	30½	36⅞	20¾
34¾	25⅝	6,800	27¾	26¾	26⅞	Shell Union Oil	13,070,625	N.P.	25c	12-15-36	.25	28¼	14¾	16½	5½
105⅜	102	500	105	104¼	104¾	Shell Union Oil 5½% pfd.	343,500	$100	26⅛c	12-15-36	28.87½	127½	102	111	63⅛
4¼	3½	100	3⅝	3⅝	3⅝	Simms Petroleum	461,698	$10	50c liq.	1-9-37	2.25 liq.	6¾	3½	18⅜	4⅜
60⅝	42	3,100	55	52	54½	Skelly Oil	1,006,348	$15	50c	7-1-37	....	47⅜	19½	20½	6½
20¼	16¼	66,400	19¾	18	19½	Socony-Vacuum	31,151,071	$15	25cSA	3-15-37	.70	17½	12½	15⅜	10⅝
50	39⅝	14,600	41⅝	39⅝	41½	Standard Oil of California	13,014,754	N.P.	45cQ†	6-15-37	1.20	47⅝	35	41⅛	27¾
50	40½	13,200	42½	40½	42½	Standard Oil (Indiana)	15,196,241	$25	40cQ†	6-15-37	2.40	48½	32¾	33⅜	23
33⅜	30⅝	No sales	..	..	..	Standard Oil of Kansas	134,841	$10	$1	12-26-36	1.00	31	25	32	20
76	63⅛	19,800	66½	63⅛	65¾	Standard Oil of New Jersey	25,856,081	$25	$1.25SA†	6-15-37	2.00	70⅜	51⅛	52⅜	35⅝
77½	65	100	65	65	65	Sun Oil	2,156,825	N.P.	25cQ	6-15-37	$1 & 6% Sk.	91	70	77	60⅛
65⅛	50⅜	38,700	58½	55½	57¾	Texas Corp.	10,896,858	$25	50cQ	7-1-37	1.50	55¼	28⅞	30¼	16½
9⅝	6⅛	7,800	7	6⅛	6¾	Texas Gulf Producing Co.	888,124	N.P.	5c	12-15-36	.05	8⅞	4⅜	4¾	2½
16⅝	11¾	6,900	14⅜	12¾	14⅜	Texas Pacific Coal & Oil	888,237	$10	10c	6-1-37	.25	15¼	7½	9¼	3¼
21⅝	15⅜	13,200	16⅞	15⅜	16½	Tide Water Associated	6,288,512	N.P.	20cQ	6-1-37	.70	21¾	14¾	15⅞	7⅝
28¼	23	6,600	24	23	23¼	Union Oil of California	4,386,070	$25	30cQ	5-10-37	1.00	28½	20¾	24	14¾
31½	24¾	2,000	26¾	24¾	26¾	Union Tank Car Co.	1,200,000	N.P.	40cQ	6-1-37	1.20	31⅝	22⅝	26½	20⅞
6¼	4¼	2,800	5¼	4¼	5	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	5¼	2¾	3⅛	1

*Ex-dividend. †Includes extras.

New York Curb Exchange

1937 High	1937 Low	Week ended June 19 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
21⅜	16	800	16¾	16	16½	Bridgeport Machine Co.	260,000	N.P.	$1	12-21-36	$1.00	21	13¼	14⅛	3⅝
51½	46	No sales	..	..	..	Buckeye Pipe Line Co.	200,000	$50	$1Q	6-15-37	3.25	50	39¾	42''	;
2¾	1⅝	2,900	1⅝	1⅝	1⅝	Carib Syndicate	799,020	25c	....	.....	....	4⅞	1⅞	₂₋₄	1⅝
123	110¼	50	115	115	115	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-28-37	7.00	124¾	105	157	115
5⅜	2⅝	31,400	2⅞	2⅝	2⅞	Cities Service	37,804,394	N.P.	....	6-1-32	....	7⅜	3	3¼	⅝
4⅝	1¼	5,500	1⅝	1¼	1⅝	Cosden Oil	399,687	$1	....	.....	....	4½	1½	1½	¼
38	28½	6,400	35½	32¼	35½	Creole Petroleum	6,974,356	$5	50cSA†	6-10-37	.50	39	19⅞	23¾	10
18⅝	11⅜	800	13	12⅛	12½	Darby Petroleum	351,390	$5	25cSA	7-15-37	.50	18⅛	9	8⅞	4
8¼	5¼	4,100	6¾	6¼	6½	Derby Oil & Refining	263,162	N.P.	....	....	....	6¾	1⅞	2	⅝
47½	36½	No sales	..	..	..	Eureka Pipe Line	50,000	$50	$1Q	5-1-37	4.00	47½	38½	38	33¼
63½	50	9,800	52¾	50	52¼	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-37	1.50, 100% Stk.	59	36	74¾	50¼
87	72	2,500	76⅜	72	75	Humble Oil & Refining	8,923,935	N.P.	37½cQ	7-1-37	1.50	80	57	64	44
24¼	20⅛	3,400	20⅞	20½	20⅝	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-37	1.25	24½	19¾	22½	15⅝
15	7¾	100	11	11	11	Indiana Pipe Line	300,000	$10	30cSA	5-15-37	.80	9¾	5½	6⅛	3⅝
39½	33½	4,100	34⅝	33½	34⅝	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-37	2.50	39⅝	32⅝	39¾	28
15¼	11⅜	7,900	12¼	11¾	12	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	3-15-37	.50	15⅜	9⅞	11⅜	4⅜
32½	16⅛	28,000	32½	25⅛	32	Lion Oil Refining	270,000	N.P.	50cQ†	7-20-37	.75	17¾	7⅜	8⅛	3½
14¼	9⅞	3,400	10⅜	9⅞	10¼	Lone Star Gas	5,382,723	N.P.	20c	4-20-37	.60	14¼	9⅞	10⅞	4½
14⅝	9½	500	9⅞	9½	9⅝	Midwest Oil Co.	998,444	$10	50c	6-15-37	.	.	.	.	.
7⅞	5¾	2,700	6⅛	5¾	5⅞	Mountain Producers	1,682,182	$10	30cSA	6-15-37	.60	8⅜	5	5¾	4⅛
19½	14½	1,800	15	14½	15	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-37	1.00	23	17⅜	20	11¾
12½	10	500	10¼	10⅛	10¼	National Transit	509,000	$12.50	45cSA	6-15-37	.75	15⅜	9¼	10⅝	6¾
6⅛	4¾	100	5⅜	5⅜	5⅜	New Bradford Oil	1,445,202	$5	15cSA	4-15-37	.10	4⅝	2⅞	3¼	2
5	2⅝	400	2¾	2⅝	2¾	New Mexico and Arizona	1,000,000	$1	1c	12-1-36	.01	6⅝	1⅝	2½	1
5⅜	4½	100	4½	4½	4½	New York Transit	100,000	$5	15cSA	10-15-36	.35	6¼	4¼	4⅞	3
12¾	7½	100	10⅛	10⅛	10⅛	Northern Pipe Line	120,000	$10	40c	6-1-37	.40	9¾	4⅞	8	5¼
9⅝	5½	42,000	7⅞	6⅞	7⅝	Pantepec Oil	1,608,700	N.P.			....	10⅛	3¼	4⅜	1¼
13¾	5	5,200	7⅛	5	7	Root Petroleum Co.	336,045	$1	25c	11-2-36	.50	19¼	4½	5	1½
6½	4	800	5⅝	5½	5⅝	Ryan Consolidated	296,931	N.P.	....		....	4¾	1⅞	2½	⅝
48	42	700	43½	43¼	43½	South Penn Oil	1,000,000	$25	75cQ†	6-30-37	2.60	44	32½	34½	21⅝
7¼	5	100	5⅛	5⅛	5⅛	Southern Pipe Line	100,000	$10	20cSA	3-1-37	.25	7⅞	3¼	5	3⅞
42	30	No sales	..	..	..	South West Penna. Pipe Lines	35,000	$50	50cQ	4-1-37	13.00	60	44	56	44¼
20¾	19	2,700	19⅝	19⅛	19½	Standard Oil of Kentucky	2,604,790	$10	40cQ†	6-15-37	1.35	23⅜	17⅛	24	18
13¾	10	300	10⅛	10	10	Standard Oil of Nebraska	188,403	$25	25c	3-29-37	.25	14⅝	11	12	7¾
45	33	2,200	36	33	34	Standard Oil of Ohio	753,740	$25	25cQ	3-15-37	2.00	40	21¾	23⅝	11½
4⅞	3¾	4,900	4	3¾	4	Sunray Oil	1,910,119	$1	5c	4-26-37	.10	5	2⅝	2⅞	⅞
7⅝	5¼	800	5½	5¼	4½	Texon Oil & Land	336,028	$2	15cQ	6-30-37	.60	9¾	5⅝	6⅞	5

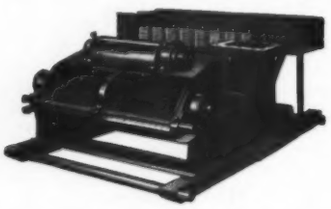
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW OR IMPROVED EQUIPMENT

McNeely Mud-Screen Provides Drilling Fluid at Low Cost

The new and improved McNeely vibrating mud-screen, Model E, put on the market by the Vernon Tool Co., Ltd., Los Angeles, Calif., is said to provide a dependable supply of clean, plastic drilling fluid at low operating and maintenance costs. Features



include strength for rough service, completely unitized design for easy handling in the field, and a curved screen surface which increases capacity and lengthens screen life.

According to the manufacturer, the new mud-screen has an average capacity of 650 gallons of drilling fluid per minute, equal to the output of the largest mud pumps. The vibrating frame and screen cloth are divided into two sections. Thus only one-half the cloth need be replaced at one time. Each half is independently tensioned and new cloth is easily installed and stretched taut.

Nonsparking Wrench Reduces Danger of Inflammable Gas

J. H. Williams & Co., 75 Spring Street, New York, has put on the market a new line of safety wrenches, drop-forged from beryllium-copper. The tools are designed for use in the presence of inflammable gases and in other locations where a spark caused by metal-to-metal contact would be dangerous. In such situations Williams' beryllium-copper wrenches are said by the manufacturer to be positively safe. These nonsparking wrenches are reported to be virtually as strong as carbon-steel tools of similar sizes. They are nonmagnetic and noncorrosive. The tools are made in a wide range of sizes in both single- and double-head for use wherever inflammable gases or other conditions create a hazard in case of sparks. They are of distinct value in many types of oil operation.

Bulletins, Booklets and Other Literature for the Trade

Quimby Pump Co., 340 Thomas Street, Newark, N. J., has prepared for distribution an eight-page bulletin on Quimby Rotex pumps.

A mailing piece from the Union Asbestos & Rubber Co., 1821 South Fifty-fourth Avenue, Cicero, Ill., gives details of construction, efficiency comparison charts, details of application, etc., on the company's line of asbestos insulation, including Unibestos sectional pipe covering and blocks for both regular and high-temperature service.

Demand for the catalog of the Ideal Commutator Dresser Co., Sycamore, Ill., not only for buying reference, but for valuable information, was so great that a revised edition has been published.

Twelve modern types of industrial furnaces for which the new JM-20 insulating brick has been developed are illustrated in a new piece of literature entitled, "Lower Furnace Operating Costs With Johns-Manville JM-20 Insulating Brick." Furnace drawings show the application of this new insulating brick to each of the 12 different types.

A 12-page illustrated bulletin describing the MHB horizontal twin-engine rotary drive for drilling contractors and operators is being sent on request by the Continental Supply Co., Dallas, Tex.

Four new bulletins on recording and controlling gauges have just been published by Bristol Co., Waterbury, Conn.

Permobond Now Is Available For Many Kinds of Service

Permobond corrosive-proof protective linings, manufactured by United States Rubber Products, Inc., 1790 Broadway, New York, is available now for virtually every kind of service, the company announces. As a result of progress made in the compounding of rubber and in the process of bonding rubber to metal Permobond is said to provide maximum resistance to corrosion, diffusion, abrasion and electrical conductivity. For storage equipment Permobond is designed to insure freedom from mechanical difficulties, increased uniformity of product and freedom from contamination.

Permobond linings offer three distinct advantages: (1) Compounding the rubber to meet the specific problems of the job; (2) permanent bonding of the lining to the walls of the tank; (3) the fact that no workman puts a hand to the job until the company's engineers have planned it for design, facility of installation and specification of rubber. The result is a job especially engineered to fit individual requirements plus a permanent leak-proof lining and a bond that is practically an integral part of the metal surface itself.

Caterpillar Twenty-eight skidding sheet metal into position for building storage tanks at Sinclair Refining Co. plant, Houston, Tex. Sheets used on lower rings are five-eighths inch thick and weigh 3 to 6 tons. Those for upper rings weigh about 1,800 pounds each. With the Caterpillar one full ring is set and welded in three hours

Petal Cementing Basket Forms Seal Against Wall of Hole

Greater strength, resistance to the action of acids, and adaptability to casing programs are among the advantages claimed by the new metal "Petal" cementing basket developed by Baker Oil Tools, Inc., 2959 East Slauson Avenue, Huntington Park, Calif. While the applications of this new basket as an aid in placing cement around casing are the same as those of the Baker canvas basket, it is constructed entirely of metal and incorporates features which improve its operation.

A cementing basket serves as an outside packer during cementing jobs. It protects the formation from cement contamination and from sloughings of cavings and aids in the cementing job by preventing dissipation of the slurry that might occur. The new basket is made up of overlapping metal "petals" held in place with reinforced spring-steel ribs. While running in, the petals fold inward closely around the casing and pass easily down the hole. When the casing comes to rest, the petals expand to their normal position, with the upper portion of the basket forming a seal against the wall of the hole.

The petals are constructed of flexible sheet brass and are so designed that when fully expanded each petal overlaps by a sufficient margin to prevent the fluid above the basket from passing to the formation below.

Oil Show Increases Exhibit Space

It already has become necessary to obtain more space to display the equipment at the Oil-World Exposition to be held in Houston, Tex., from October 11 to 16, 1937. A contract has been signed with the city of Houston for the rental of five vacant city blocks of park board property adjacent to the main exposition building. More than 200 additional exhibiting spaces will be provided by the erection of a large tent guaranteed waterproof and provided with wooden floor, electric outlets, booth partitions, signs, water, gas and all other facilities exactly like those in the exposition building. The main entrance to the oil show and access to the convention hall, meeting and convention rooms, demonstration spaces and outdoor exhibits will be through this tent.

Macwhyte Announces Changes

The Macwhyte Co., Kenosha, Wis., elected George S. Whyte, former president, to the newly created office of chairman of the board. Jesse S. Whyte, former vice president and general manager, was elected president and general manager, succeeding his father in the former capacity. H. E. Sawyer was reelected vice president, treasurer and director, and he continues as general sales manager. Other members of the board are Robert B. Whyte, newly elected, and W. Robert Johnston.

Mid-Co Plunger-Type Bailer Is Adaptable to Any Condition

The Mid-Co Tool & Supply Co., Box 1542, Oklahoma City, Okla., has introduced the Ideal bailer, a new plunger-type bailer, which is said to increase safety and save time in cleaning out and reconditioning producing wells. The different type heads, quickly interchangeable, make it possible to adapt the pump to any condition. One head permits jars and sinker to be used above the bailer if it is desired to do so.

Another important feature is the plunger construction, which permits limited free movement of the plunger weight in relation to the sleeve. According to the manufacturer, this detail permits a close-fitting sleeve, which, along with the fluid expansion ring, an exclusive feature, assures maximum efficiency with every stroke of the plunger. This feature also allows the plunger weight to swivel and consequently prevents kinking of lines when hard spudding becomes necessary.

The patented one-piece bottom, also an exclusive feature, permits maximum opening. This allows large pieces of junk and debris to be drawn into the bailer and eliminates the necessity of using tools in nearly all reconditioning jobs. The one-piece construction also prevents the possibility of losing the bottom. All other type bottoms are stocked and quickly interchangeable when necessary.

The tube and all working parts are made from the best-grade material to assure long life and minimum trouble when in use.

Anniversary for Garlock

This year is the golden anniversary of the Garlock Packing Co., for it was just 50 years ago that it began manufacture of mechanical packings. In the village of Palmyra, N. Y., shortly after the close of the Civil war, one of the founders of the company conceived the idea of making mechanical packings by cutting a ring from an old piece of rubber hose and putting it in a stuffing-box of an engine used to furnish power to a sawmill. The experiment proved so successful that similar packing-rings and washers were sold to users of steam engines. In 1887 the Garlock Packing Co. was founded, with a little staff of workmen, and it started manufacture of mechanical packings on a commercial basis. Today, Garlock has over 1,000 employes, including representatives who sell hundreds of Garlock products to some 40,000 customers. The general offices and factories are in Palmyra. Sales offices and warehouses are maintained in 28 cities of the United States and Canada. Branch factories are operated in Birmingham, Ala.; Denver, Colo.; San Francisco, Calif., and Hamilton, Ontario.

Here and There With Men Who Manufacture Equipment

C. B. Johnson, general manager of McKissick Products Corp., Tulsa, is spending a month in the oil fields of Ohio, Illinois and Michigan.

J. B. Trotman, manager of the turbine pump division of the Roots-Connersville Blower Corp., Connersville, Ind., announces appointments of zone representatives, as follows: Carl B. Sunderland, Muncie, Ind., covering Indiana, Ohio, Michigan, Illinois, and Kentucky; J. J. Heinrikson, Kansas City, Mo., covering Kansas, western Missouri, most of Nebraska, and the southwestern quarter of Iowa; Paul C. Rowe, Newark, N. J., covering the northern half of New Jersey.

The Ajax Flexible Coupling Co., Westfield, N. Y., announces new sales offices in Akron, Kansas City and Seattle. Its distribution set-up now includes 24 cities from coast to coast. Beese & Terry will represent Ajax in Akron, Arthur D. Schwartz in Kansas City and W. F. Nichols in Seattle.

The Mechanical Goods Division of United States Rubber Products, Inc., has transferred C. W. Gilmer, manager of mechanical sales for the Seattle, Wash., branch, to the New York office, 1790 Broadway, as belting sales engineer. L. F. Koepp succeeds Mr. Gilmer in Seattle.

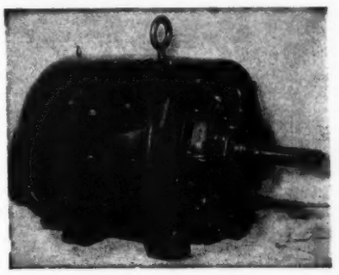
M. A. Macbeath, vice president and general manager of the Star Drilling Machine Co., Akron, Ohio, is visiting Mid-Continent oil fields.

Belts Unaffected by Floods

The Manhattan rubber manufacturing division of Raybestos-Manhattan, Inc., Passaic, N. J., has been informed of an unusual record made by Condor compensated belts. Two horizontal waterwheel drives at the Prospect Mills, Inc., Lawrence, Mass., equipped with these belts, were submerged by two floods. In the first the two belts were under 7 feet of water for five days; in the second, lasting 12 days, 1 to 20 feet of water covered the belts. After each flood the belts were dried, cleaned, dressed and put back to work. Today they are still running as well as the day of installation. All the other belts in this plant were ruined.

Westinghouse Introduces New Type of Fan-Cooled Motor

Protected against abrasive dust, moisture and corrosion, a new design of dual-ventilated fan-cooled type CS squirrel-cage motor has been put on the market by the Westinghouse Electric &



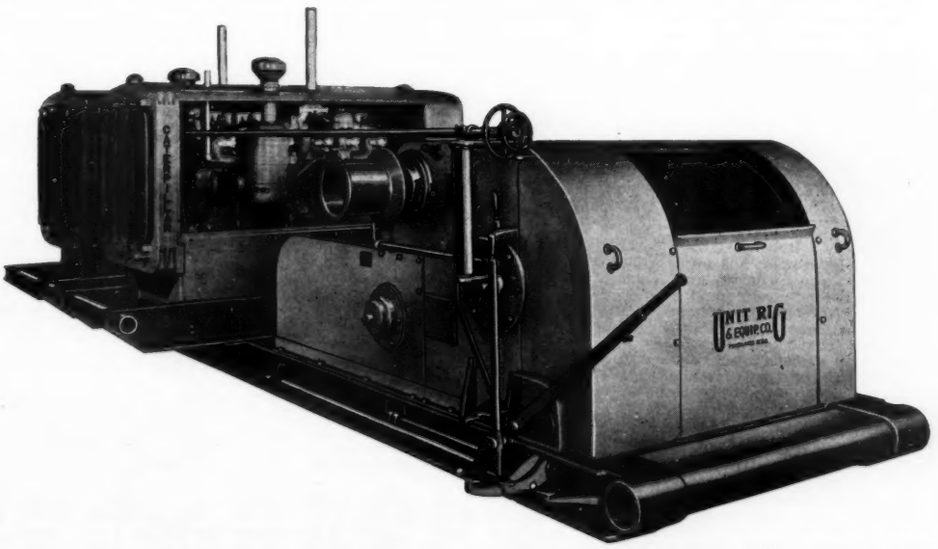
Manufacturing Co. The motor frame contains two separate sets of air-ducts, one set internal and one external. The internal ducts are open in the interior part of the motor and the external ducts are open on the outside of the motor frame. The two sets are separated by a common wall.

The heat-exchanger principle is used for cooling. The housing is designed so that fresh grease enters the outside edge at the top of the bearing and excess or used grease is discharged at the bottom edge to the over-flow sump. Since adding fresh grease automatically cleans the used grease from the bearing, it is unnecessary to incur the expense of periodically dismantling the motor to clean the bearings.

W. H. Nicholson & Co., 12 Oregon Street, Wilkes-Barre, Pa., has prepared for distribution a six-page illustrated folder telling about the Nicholson industrial steam trap.

PORTABLE DRILLING UNIT FOR DEPTHS TO 6,500 FEET

A portable drilling unit for which unusual economy is claimed in drilling wells of 2,000 to 6,500 feet, is announced by the Unit Rig & Equipment Co. of Tulsa. The drawworks and transmission systems are arranged to take 100- to 200-hp. engines, either diesel or gasoline. Although engines and drawworks may be separated if desired, the unit is mounted so it may be moved intact in one truck load.



This unit rig, model U-10, embodies, according to the manufacturers, several important features in design and construction. The speed control is handled with only one lever, which, by a new method of friction-clutch application, allows shifting from low to high and back to low without change in engine speed, affording a flexibility ordinarily available in steam drilling units only. Transmission is of chain-drive, oilbath type, fully enclosed and dustproof. There are four forward and two reverse speeds.

The brakes are fullwrap, self-energizing and accurately equalized. Brake construction insures safety and easy "feeding off." Bands are interchangeable and brakes are instantly adjustable at one point. Although normally one engine is connected with the drawworks and the other with the mudpump, the system of clutches permits the engine drives to be compounded to run either or both the drawworks or the mudpump, both engines handling the common load.

Oil Man's Calendar

June

25-26—Dallas, Tex., National Oil Scouts Association, annual meeting, Baker Hotel.

June—July

28-July 2—New York, American Society for Testing Materials, fortieth annual meeting, Waldorf-Astoria Hotel, together with fourth A.S.T.M. exhibit of testing apparatus and related equipment.

July

12-13—Santa Fe, N. M., Interstate Oil Compact Commission meeting.

September

(?)—San Francisco, Calif., North American Gasoline Tax Conference.

15-17—Atlantic City, National Petroleum Association, annual meeting, Hotel Traymore.

27—Cleveland, Ohio, American Gas Association, nineteenth annual convention.

September—October

27-Oct. 1—Rochester, National Association of Petroleum Retailers, fifth national convention.

30-Oct. 1.—Tulsa, S.A.E. Fuels and Lubricants Regional Meeting.

October

7-9—Los Angeles, Calif., S.A.E. National Aircraft Production Meeting, Ambassador Hotel.

11-15—Kansas City, Mo.—Twenty-sixth National Safety Congress and Exposition.

11-16—Houston, Tex., Oil-World Exposition.

14-16—Pittsburgh, Pa., mid-year meeting, American Association of Petroleum Geologists, William Penn Hotel.

14-16—Houston, Tex., Independent Petroleum Association of America, annual meeting.

26—New York, Oil Trades Association of New York.

28—New York, S.A.E. Annual Dinner, Commodore Hotel.

29-30—Dallas, Tex., Mid-Continent Oil and Gas Association of Texas, annual meeting.

October—November

27-Nov. 3—New York, National Automobile Show, Grand Central Palace.

November

9-12—Chicago, American Petroleum Institute, eighteenth annual meeting, Stevens Hotel.

December

6-11—New York, Exposition of Chemical Industries, Grand Central Palace.

8-10—Flint, Mich., S.A.E. National Production Meeting.

1938

March

16-18—New Orleans, twenty-third annual meeting, American Association of Petroleum Geologists.

April

17-21—Dallas, Tex., American Chemical Society.

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LABORATORY TECHNICIAN, GEOLOGIST. B. S. Univ. of Ill., '34; M. A., Smith, '36 in geology. Training in micropaleontology and sedimentary petrography. Additional training in chemistry. 3 years as assistant in geology dept. at Smith. Technical experience in photography and geologic illustration. Available immediately for work anywhere. Margaret Frances Harper, 226 Penning Avenue, Wood River, Ill.

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7 Lines	*$2.45*	*$4.20*	*$5.95*	*$7.70*
8 Lines	*2.80*	*4.80*	*6.80*	*8.80*
9 Lines	*3.15*	*5.40*	*7.65*	*9.90*
10 Lines	*3.50*	*6.00*	*8.50*	*11.00*

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Tulsa, Oklahoma